CHAPTER-I
INTRODUCTION

Nepal is a landlocked, mountainous country situated between India and China It is a small, mostly agrarian based economy, sharing an open border with North India. Agriculture constitutes nearly 40% of GDP, Nevertheless, at present economy is not completely dependent on Agriculture. Due to declining rate of agriculture productivity has forwarded a new issue to re-evaluate the methodology adopted earlier in measuring the economic growth. Consequently, other innovative approaches to the development were required. Due to this, the revised national income estimation methodology depicted the higher rate of economic growth than that of the previous one.

Development, by the term, does not merely indicate a particular sector of the economic pattern. Nor is it associated with the materialistic view of growth. In a broad-based concept of today's perspective, it should be sustainable and result-oriented that could last for the centuries to come. The furtherance of scientific discoveries and inventions, industries, trade and commerce etc. rests on the perennial efforts made in this direction. The basis of all these parameters is cemented and solidified with the optimum utilization of existing resources. Of them the appropriate usage of scares resources depends upon the diversified ways adopted to give shave to the techniques of collecting funds required for the purpose. This concept let to the development of conglomerates in view of industrial and commercial existence of institution.

Industrial development began in Nepal only in the mid-sixties, when the Government began establishing manufacturing industries such as the jute industry, cement factories, and sugar factories. In order to support this industrialization process, government actively promoted financial institutions, such as commercial banks and capital market institutions As a result of capital markets that constitute both financial and money markets was realized conceptually a causative element for the economic prosperity from the point of view of a state, of the society and, to say the list, of an

individual. Under the concept of capital markets the role performed by security market cannot be ignored rather it is given a top priority in the light of present days achievement reaped in the field of trade, commerce and industry. It is because the securities market upholds such entities financially by ushering in the opportune of savings remained passive in different forms.

The Nepali capital market had its beginnings with the establishment of the Securities Marketing Center in 1976. Since then bearing many characteristics developments have been witnessed in the spectrum of mobilizing financial resources to the installation of varied organization. No economically productive activities can be brought to the existence in absence of adequate financial resources. This sort of complexities can only be ironed out if people's participation in financing is perceived as a stepping-stone for the sustainable development. Similarly, financial constants can also be to some extent, obviated, if people at different levels are educated of a familiarized with the benefit to be reaped from investment and disinvestments of securities. Besides this, there are yet much more potentialities to be explode for the development of securities market in Nepal. Not withstanding the fact that die-hard competition has percolated in each and every segment of society in the wake of restoration of multiparty system, this has to indicate green signal to activate the unused resources to benefit the society. That is why, the significance of securities whether it is public or private has gained momentum. Even the general public is seen enthusiastic in investment and disinvestments securities that they have held.

1.1 Background

Nepal is least developed countries in the world. The main problem or reason for underdevelopment is lack of scarce capital. With economic development the need of capital was hugely felt. Business enterprise require incredible amount of capital for growth & smooth operation. Business enterprise requires capital for different needs i.e. Short term, intermediate term and long-term capital need. Out of them, long-term capital needs is highly important for expansion and growth. Organizations

highly depend on financial market to generate capital for long term need. Similarly, government also required huge amount of capital for overall development of country, when the Government started to promote manufacturing industries to establish such as the jute industry, cement factories, and sugar factories. In order to support this industrialization process**,** government actively promoted financial market.

Financial markets played a catalyst role in the development of the country's economy. Financial institutions provide service as intermediaries of the capital and debt markets. They are responsible for transferring funds from investors to companies, in need of those funds. The presence of financial institutions facilitate the flow of money through the economy. To do so, savings are pooled to mitigate the risk brought to provide funds for loans. Such is the primary means for depository institutions to develop revenue.

"The financial market permits both business and government to raise the needed funds by selling securities. Simultaneously, investors with excess funds are able to invest and earn in return enhancing their welfare." (Johns, 1992: 261).

"The purpose of financial market in an economy is to allocate saving efficiently during the period of time – a day – a week or a quarter – to parties who use funds for investment in real assets of consumptions." (Van Horne, 1998: 491)

Financial markets play a fundamental role in the economic development of country. They are the intermediary link in facilitating the flow of funds from savers to investors. Banks saving and loan association, mutual saving banks, credit unions, insurance companies, pension funds and other institutions are some financial intermediaries and these types of intermediaries come between ultimate borrower and lender and transfer the direct claims into indirect. By providing an institutional mechanism for mobilizing domestic savings and efficiently channeling them into

productive investments they lower the cost of capital to investors and accelerate economic growth of the country

"Financial intermediation between borrowers and savers is done by commercial banks. This credit market enables debt financing for investments. An alternative method of intermediation is through equity financing. This is only possible through the development of capital markets & Money Market.

Money markets concentrate on short-term debt instruments having maturity to less than one year. Money market may be defined as short-term financial assets markets, which facilitate liquidity and marketability of securities. Examples of money market securities include Treasury bills, central agency securities, bankers' acceptances, commercial paper, and negotiable certificates of deposit issued by government, business, and financial institutions.

Capital market plays a vital role in the national economy which rejuvenates and boosts economic activities in the country. Capital markets, which deal with securities such as stocks and bonds, are associated with financial resource mobilization on a long term basis which has maturity of more than one year. Capital markets also allow for wider ownership among the public, thereby distributing risks and wealth amongst smaller investors. As such, capital markets help the economy to generate more savings and productive investments. A basic feature of an efficient capital market is constant liquidity, i.e., an easy mechanism for entry and exit by investors. Typically in developing countries, for various economic and policy reasons, financial markets are underdeveloped. In those countries where a capital market & money market does exist, it is in a very rudimentary state. It is an organized institution where various securities are issued and traded for the purpose of collection and mobilization of private and institutional savings. Capital market also allows altering liquidity position, risk of their prospective portfolios in response to availability of information and marketability of securities.

"One of the mechanisms of financing the industries from the external resources in the modern times is the capital markets through which the industrial enterprise with corporate and organizational assemble of funds by issuing the various forms of securities for the surplus spending units directly and via financial enterprise." (Mahat, 1981:39)

1.2. Evolution of Capital market in Nepal

The Nepali capital market had its beginnings with the establishment of the Securities Marketing Center in 1976. In 1984, the Securities Exchange Act was promulgated and this institution was converted into the Securities Exchange Center (SEC) under the ownership of the Nepali Government, Nepal Rastra Bank - the Central Bank - and the Nepal Industrial Development Corporation – a government owned industrial development bank. The main function of SEC was to assist in the development of a capital market by performing the role of a broker, underwriter and share issuer, and to sell government bonds. It operated an over the counter market for company shares and government bonds. After the inception of the Securities Exchange Center, shares of various manufacturing, trading and banking companies became listed. Interestingly, the listed shares were dominated by public enterprises during this stage. Between 1984 and 1990, 42 companies were listed, out of which more than 25 companies had some form of government ownership.

The real boost into the capital market in the form of a private sector led growth began with the financial sector liberalization. In the mid-eighties, Nepal opened its doors to foreign investors as joint venture partners in the banking sector, which revolutionized commercial banking services in Nepal. Since then, a variety of private sector based financial institutions have evolved. In 1992, the Finance Companies Act was amended. These enabled finance companies to be established to function in various areas such as leasing, housing finance, and hire-purchase. These institutions were also allowed to perform capital market functions such as share issue, portfolio management, market making and custodial services.

The growth of these financial institutions was complemented by the establishment of the Nepal Stock Exchange. In 1993, the Securities Exchange Act was amended. The Securities Exchange Center was converted into the Nepal Stock Exchange for securities trading by private brokers and the Securities Exchange Board was established for oversight functions as a regulatory body. This amendment also permitted private sector market intermediaries and set the operating guidelines for intermediary functions such as broking, market making, issue management, and portfolio management. The economic environment which provides the main stimulus for a healthy growth of the capital markets has also influenced this market quite considerably. In 1992, the Finance Companies Act was amended. As a result, in the three year period, more than 30 finance companies were established all of whom have made public share issues and are being listed on the Stock Exchange. This growth in the financial sector was further boosted by the liberalization of the commercial banking sector. The Central Bank gave licenses to more than 5 joint venture commercial banks. The commercial banking industry has historically performed very well in the capital markets, which infused a lot of investor interest in the market during the early stages of its development. Together, these sectors accounted for 65% of the turnover and 36 % of the total amount of public issue in 1994/95. In Nepal, the financial sector has witnessed tremendous growth and profitability, in contrast to the manufacturing sector where profitability has been very low1. The manufacturing companies which are listed on the Stock Exchange have typically been very stagnant because they are primarily government owned public enterprises or newly established companies without a long track record of profitability. Privately owned companies which are profitable generally hesitate to go public owing to tax or other reasons. As a result, the growth of the stock market has mainly been due to the liberalization and the resulting growth of the financial sector (commercial banks and finance companies) rather that that of the industrial sector.

Government's privatization policy also enabled new industrial companies to enter the stock market. In 1994/95, of the total public issue, 31% was issues of privatized companies. In 1992, the Government brought out the Industrial Enterprises Act and enforced the one-window policy to actively promote foreign investment in the country.

This resulted in some new joint venture companies in the country, which accounted for 29% of the public issue in 1994/95.It is the objective of all policymakers to try to ensure a healthy, sustainable and stable growth of capital markets. It is the responsibility of the policymakers to be help to help and sustain a favorable growth environment for the infant capital market. To promote a healthy, competitive market, policymakers should seek to increase the number of market intermediaries and investors, both individuals as well as institutional. The regulatory environment also needs to be strengthened. A lot of institutional changes are necessary if Nepal is to have a sophisticated capital market that will be able to cater to the needs of all market participants. It is only when there is a healthy, competitive institutional structure supported by liberal and stable economic policies facilitating increased savings and investments in the country that the capital markets can grow

1.3. Evolution of Stock market in Nepal

The stock market is working as the channel through which the public savings are channelized to industrial and business enterprises. Mobilization of such resources for investment is certainly a necessary condition for economic take off, but quality of their allocation to various investment projects is an important factor for growth. This is precisely what an efficient stock market does to the economy

Prior 1956 Nepal Bank Limited was the only financial institution operating under Nepal Bank Limited Act 1937. Another commercial bank, Rastriya Banijaya Bank was established under Rastriya Banijya Bank Act 1966 in the public sector. A single commercial bank act was enacted in 1974 to consolidate the functioning of all the commercial banks under one legal umbrella. Also the finance companies Act and development Bank Act

came in 1985 and 1996 respectively. At present, the country has 17 commercial banks including joint venture banks, seven development banks including Agriculture Development Bank and Nepal Industrial Development Corporation and 46 finance companies operating in the financial market. In addition to the above there are 5 rural development banks, many saving and credit cooperatives and NGOs operating in the economy. Besides there are 13 insurance companies including Deposit and Credit Guarantee Corporation and other non-depository institutions like Employees Provident Fund and Citizen Investment Trust collecting huge amounts of fund from the public in different forms and nature, providing long tern funds to the people for various purposes.

In the absence of developed securities market in Nepal, the government was the sole issuing authority of development bonds National Saving Certificates. Therefore, the securities generally floated in the market were mainly the government securities. Nepal Rastra Bank as the central bank is responsible to mobilize resources, on behalf of the government, to finance development activities and manage public debt under the Public Debt Act. Accordingly Nepal Rastra Bank has been managing as the issue of short-term treasury bills and various types of development bonds to collect public debt for the government from time to time. Ninety-one day Treasury Bills of Rs. 7 million were issued for the first time during June/July 1962. The government floated six percent Development Bond of Rs 13.1 million with a maturity period of five years for the first time on February 12, 1964. In 1965, three percent compensation bonds with a maturity period of 10 years were issued for the acquisition of Birta Land and one percent compensation Bonds with a maturity of 20 years issued for the acquisition of private forest. Non-interest bearing prize bonds of Rs 861 thousand were also issued to individuals in 1969. Nepal Rastra Bank makes arrangement for the issue, register, purchase and sale, transfer of ownership and redemption of government bonds and debentures. Therefore, Government securities are fully traded under the management and supervision of Nepal Rastra Bank.

Altogether 36 public enterprises were established through subscription of shares under the Company Act during 1960-1975.The government had dominant control as to the capital investment and management in most of these companies. Many companies were later on either liquidated or liquidated or sold to private parties. Some of the prominent companies are still in operation under public sector while a few of them are in the process of privatization. Most of the companies were incorporated either under the full ownership of the government or under joint investment with the private sector. The role of private sector except in the operation of few small-scale industries was almost nil during that period.

Institutional development of securities market in Nepal started from the year 1976 when Securities Exchange Center (SEC) was established under the Company Act with the joint capital contribution of Nepal Rastra Bank and Nepal Industrial Development Corporation. The Industrial Policy of the Government also encouraged the promotion of securities exchange activities in Nepal .The main objective of the establishment of the center was to mobilize public savings and encourage the people to participate in the ownership of industries the people to participate in the ownership of industries and business enterprises. As a securities market intermediary, its role was to organize and provide marketing facilities of channeling securities exchange business through the center. Its activities included the purchase, underwrite and sale, directly or through the licensed brokers or sub-brokers of the center, the shares, stocks an debentures of public limited companies and also development bond as well as Treasury Bills issued by the government

1.4 Focus of the study

The focus of the study will also attempt to center on relationships among liquidity ratios, profitability ratios, market price to book value ratios and many other key ratios. Since this study is based on stock market, many aspects of the stock market is also attempted to deal. This mainly due to lack of appropriate information dissemination system, absence of professional brokers, rigid rules and regulations, small value of trade and

declining transaction, infant stage of investment banking., lack of investors' consciousness are main problems in stock market. Due to inadequate infrastructure and limited activities of Securities Exchange Center, Nepalese market could not contribute in economy as compared to developed counties.

1.5 Statement of problem

In the last two decades, the link between finaancial situation of a company and price of stock is a subject of high interest among academics, policy makers and economists around the world. There have been attempts to empirically assess the price behavour of the stock. The link between stock price and company performance has varied in methods and results.

The present Nepalese stock market is embryonic in nature and has various imperfections. The information dissemination is very poor in the market and most of the investors are not properly analyzing the fundamentals like company performance and profitability, past and current growth rate, future risk and return of securities. The weak monitoring and regulating system, no transparency on trading system, unstable political environment, no well-trained manpower and management are responsible for market imperfection. The lack of technical knowledge, majority of investors is unable to analysis the available information.

Unreliable and irregular disclosure of market information, lack of technical knowledge and awareness among the majority of investors to read and analyze the financial information, the market has become non-competitive and inefficient. Along with these, lack of strong professional analyst, independent buyer and seller, well trained manpower and management, delay in transfer of share, rational investor exist in Nepalese Stock Market. Most of the investors are not very responsive to many financial and economic changes. Some of the monetary and fiscal announcement would immediately attract the attention of investors and do have immediate effect on stock price.

Nepalese stock market is not efficient enough to evaluate the prices of stock. Most of the investors are not very responsive to many financial and economic changes. But it has been felt that they invariably respond to the dividend incomes, earning per shares, capitalization of profit to issue bonus shares and issue of right shares. The leakage of secret information in the share market from inside the company called insider trading also sometimes raises share price upward. But this is a temporary phenomenon; when the company discloses the information, the price is automatically corrected in the market. There is no doubt that their demand and supply affects the price of shares in the stock market. When there is a tendency of rising prices in the market, the supply of shares will be increased; and in contrast, when the price are falling, investor would demand more of the shares to buy, other things remaining the same. But because of the lack of reliable and regular disclosure of market information and lack of awareness and technical knowledge amongst the vast majority of investors to read and analyze the financial information, the market is non-competitive and inefficient.

- The nepalese stock market is weak because the investors don't analyse the financial indicators of the public limited companies listed with NEPSE.
- There is lack of awareness among investors of the financial indicators in which they are investing their funds.
- Investors prefer real assets as land, building, etc rather than financial assets as stocks, bonds, etc, so there is low capital formation and slow growth of capital market.
- The market rumors have significant impact on share price.
- Lack of knowledge about the factors that determine the movement of stock prices, the relationship between the key factors and the prevailing market price.
- Investors lack knowledge to differentiate the good and bad stock.

1.6 Objective of the study

The main objective of this study is to examine the stock price behaviour the study is undertaken with the objective of discussing examing and

evaluating the fianancail opoeration and position of commercial banks. In this context, the main objectives of the study are as follows:

1. To study the present status of stock market.
2. To highlight trend and significant development in stock market.
3. To conduct the empirical analysis of price beaviour by investigating the market position of each sample bank and compare them in terms of market price per share, earning per share, dividend per share, dividend yield, dividend payout ratio, market price to book value ratio, liquidity ratio, profitability ratios etc
4. to analyze the sensitivity of securities and compare them
5. To examine the relationship between market price per share and other determinant variables such as earning price per share and dividend per share.
6. To pin point the real problems faced by banking sector in the stock market
7. To understand how the price behaves in stock market and how an investor can safeguard his/her investment on stock market
8. To recommend some suggestions to the management of all concerned bank, investors and all concerned parties.

1.7 Significance of the study

The stock prices increase and decrease daily in stock market. There is lack of knowledge among general investors about the reason the stock prices have increased or decreased. Why stocks don't behave in same pattern. People don't know the reason behind such fluctuation.. Due to lack of awareness and knowledge in general public lose their hard earned money in stock market. If people are educated about the resons for the fluctuation in stock market they can earn money in stock market rather losing the valued capital. This study will help to know the real factors that play a direct role in the stock market. This study analyzes different aspects of the stock, key factors that determine the movement of stock in market, the prospects of a good company, the performance of selected banks during the period of recent five years, comparisons among selected banks in key issues like EPS, DPS, MPS and other ratios. This study will help the

general public to know the different variables that affects the behavior of stock price in the market. On this basis, they can invest their capital in those stocks that give them more earning so that their capital will be properly utilized.

The policy makers will also be helpful from this study, as there exists a lot of issues that need a new policy with effective rules and regulations and to make amendments in existing rules so that the stock market can function more smoothly and the general public as well as the listed companies can be benefited.

Further management of sample bank will also be benefited by knowing how their stocks are performing in the market along with their competitors so that they can take appropriate actions in time.

1.8 Limitations of the study

As stated earlier that Nepalese stock market has recent phenomenon than in the developed countries. Due to lack of adequate infrastructure and limited activities of stock exchange limited, the development of secondary market has remained in the floor. Regarding various problems, however, the study is mainly concerned with the price behavior of the securities. The main limitation is the time constraint and other is as follows:

1. The Study itself is a limitation as it is strictly prepared to fulfill the requirements of Master Degree in Business Studies.
2. The study is mainly concerned with few banks listed in the Stock Exchange Limited. So this study might not represent the overall study of capital market and cannot be generalized.
3. This study is done for five-year transaction period. (2004/05–2008/09) it does not reflect the true picture of .
4. This study is dependent on secondary data collected & published from the concerned companies and Nepal Stock Exchange.
5. It is also limited to analyze these problems that directly affect a stock price and also stock market.
6. Lack of Sophisticated technology limit the area of study and many financial tools cannot be applied.

1.9 Organization of the study

The whole study has been divided into five chapters; Introduction, Review of literature, Research methodology, Presentation and analysis of data, summary, findings and recommendations.

1. Introduction

The first chapter, introduction focuses the whole study in brief. This chapter includes introduction and background of the stock market, evolution of stock market, focus of the study, statement of problems, objective of the study, significance of the study, limitations and organization of the study.

2. Review of literature

The second chapter, review of literature reviews the existing literature. The books, journals and other research studies previously done in Nepal and as well as international level in related financial aspects are also reviewed.

3. Research methodology

The third chapter, research methodology deals with methods adopted in carrying out the projects. It includes research design, population and sample, nature and sources of data, methods of data collection, data processing and analysis, techniques and tools.

4. Presentation and analysis of data

The fourth chapter, presentation and analysis of data highlight the comprehensive presentation, analysis and interpretation of data using various financial and statistical tools.

5. Summary, Findings And Recommendations.

The fifth chapter summarizes the whole study. Moreover, it draws the conclusion and forwards the recommendation.

Chapter II
REVIEW OF LITERATURE

In this chapter, an effort is made to review the basic theoretical concept upon which this study is based. It is very important chapter as it provides the valuable inputs to this study. This chapter reviews some basic academic courses books, journals and other related studies on capital markets, theory of stock price behavior, financial institutions and financial markets, capital market efficiency, economic liberalization and capital market development, monetary policy implication and capital market development, fiscal policy announcement and capital market development. The available literature relating to the field of this study and conceptual thoughts are presented below:

2.1 Financial Institution and market

Business require huge amount of capital to establish and for the smooth operation. Business can satisfy its need by blow mentioned three external sources:

a) Financial institution
b) Financial markets
c) Private market

2.1.1 Financial Institutions

In financial economics, a financial institution is an institution that provides financial services for its clients or members. Probably the most important financial service provided by financial institutions is acting as financial intermediaries. Most financial institutions are highly regulated by government bodies. Broadly speaking, there are three major types of financial institution:

1. Deposit-taking institutions that accept and manage deposits and make loans (this category includes banks, credit unions, trust companies, and mortgage loan companies);
2. Insurance companies and pension funds
3. Brokers, underwriters and investment funds

Financial institutions provide service as intermediaries of the capital and debt markets. They are responsible for transferring funds from investors to companies, in need of those funds. The presence of financial institutions facilitate the flow of money through the economy. To do so, savings are pooled to mitigate the risk brought to provide funds for loans. Such is the primary means for depository institutions to develop revenue. The major financial institutions are commercial banks, insurance companies, pension fund and mutual funds, etc.

2.1.2 Financial Markets

A financial market is a mechanism that allows people to buy and sell (trade) financial securities (such as stocks and bonds), commodities (such as precious metals or agricultural goods), and other fungible items of value at low transaction costs and at prices that reflect the efficient-market hypothesis.Financial markets have evolved significantly over several hundred years and are undergoing constant innovation to improve liquidity.

In finance, financial markets facilitate:

- The raising of capital (in the capital markets)
- The transfer of risk (in the derivatives markets)
- International trade (in the currency markets)

Without financial markets, borrowers would have difficulty finding lenders themselves. Intermediaries such as banks help in this process. Banks take deposits from those who have money to save. They can then lend money from this pool of deposited money to those who seek to borrow. Banks popularly lend money in the form of loans and mortgages. A good example of a financial market is a stock exchange. A company can raise money by selling shares to investors and its existing shares can be bought or sold.

The following table illustrates where financial markets fit in the relationship between lenders and borrowers:

Table: 2.1: Relationship between lenders and borrowers

Relationship between lenders and borrowers			
Lenders	Financial Intermediaries	Financial Markets	Borrowers
Individuals Companies	Banks Insurance Companies Pension Funds Mutual Funds	Interbank Stock Exchange Money Market Bond Market Foreign Exchange	Individuals Companies Central Government Municipalities Public Corporations

The two key financial markets are the money market and the capital market. Transactions in short term debt instruments, or marketable securities, take place in the money market. Long term securities- bonds and stocks- are traded in the capital market.

2.1.3 Capital Market

Capital market is a market for securities (debt or equity), where business enterprises (companies) and governments can raise long-term funds. It is defined as a market in which money is provided for periods longer than a year, as the raising of short-term funds takes place on other markets (e.g., the money market). The capital market is a market that enables suppliers and demanders of long-term funds to make transactions. Included are securities issues of business and government. The backbone of the capital market is formed by the various securities exchanges that provide a forum for bond and stock transactions.

2.1.3.1 Role of Capital Market

The primary role of the capital market is to raise long-term funds for governments, banks, and corporations while providing a platform for the trading of securities. This fundraising is regulated by the performance of the stock and bond markets within the capital market. The member organizations of the capital market may issue stocks and bonds in order to raise funds. Investors can then invest in the capital market by purchasing those stocks and bonds. The capital market, however, is not without risk. It is important for investors to understand market trends before fully investing in the capital market. To that end, there are various market

indices available to investors that reflect the present performance of the market. Its Role can be pointed out as follows

- Provides an important alternative source of long-term finance for long-term productive investments. This helps in diffusing stresses on the banking system by matching long-term investments with long-term capital.
- Provides equity capital and infrastructure development capital that has strong socio-economic benefits - roads, water and sewer systems, housing, energy, telecommunications, public transport, etc. - ideal for financing through capital markets via long dated bonds and asset backed securities.
- Provides avenues for investment opportunities that encourage a thrift culture critical in increasing domestic savings and investment ratios that are essential for rapid industrialization. The Savings and investment ratios are too low, below 10% of GDP.
- Encourages broader ownership of productive assets by small savers to enable them benefit from Kenya's economic growth and wealth distribution. Equitable distribution of wealth is a key indicator of poverty reduction.
- Promotes public-private sector partnerships to encourage participation of private sector in productive investments. Pursuit of economic efficiency shifting driving force of economic development from public to private sector to enhance economic productivity has become inevitable as resources continue to diminish.
- Assists the Government to close resource gap, and complement its effort in financing essential socio-economic development, through raising long-term project based capital.
- Improves the efficiency of capital allocation through competitive pricing mechanism for better utilization of scarce resources for increased economic growth.
- Provides a gateway to Kenya for global and foreign portfolio investors, which is critical in supplementing the low domestic saving ratio.

The capital market includes following the securities and debt.

a) Security

A security is a fungible, negotiable instrument representing financial value. Securities are broadly categorized into debt securities (such as banknotes, bonds and debentures) and equity securities, e.g., common stocks; and derivative contracts, such as forwards, futures, options and swaps. The company or other entity issuing the security is called the issuer. A country's regulatory structure determines what qualifies as a security. For example, private investment pools may have some features of securities, but they may not be registered or regulated as such if they meet various restrictions.

Securities may be represented by a certificate or, more typically, "non-certificated", that is in electronic or "book entry" only form. Certificates may be bearer, meaning they entitle the holder to rights under the security merely by holding the security, or registered, meaning they entitle the holder to rights only if he or she appears on a security register maintained by the issuer or an intermediary. They include shares of corporate stock or mutual funds, bonds issued by corporations or governmental agencies, stock options or other options, limited partnership units, and various other formal investment instruments that are negotiable and fungible.

"Securities market is one of the constituents of capital market. It has a wide embracing for the buying and selling securities and all these agencies and institutions which access the sale and resale of corporate securities." (Rough, 1996:50)

To cite the definition of securities as defined by Securities Exchange Act 2040 (1983). According to this Act- “Securities means shares, stock bond, debenture, debenture stock issued by a corporate body or a certificate relating to unit saving scheme or group saving scheme issued by any corporate body in accordance with the prevailing laws or negotiable certificates of deposit or treasury bond issued by His Majesty's

Governments and it includes the securities issued under full guarantee of His Majesty's government by a notification published in Nepal Gazette or receipts relation to deposits of securities as well as rights and interest relating to securities" .

According to the above definition, the followings are the securities:

- Shares, stock bond, debenture, debenture stock issued by a corporate body.
- Certificate of unit saving schemes issued by a corporate body.
- Negotiable certificates of deposits (which are issued by a depository institution).
- Treasury bills and bonds issued by HMG.
- Securities issued under full guarantee of HMG.
- Receipts relating to deposits of securities, and paper evidencing rights and interest relating to securities.

Securities are traditionally divided into debt securities and equities.

Debt

Debt securities may be called debentures, bonds, deposits, notes or commercial paper depending on their maturity and certain other characteristics. The holder of a debt security is typically entitled to the payment of principal and interest, together with other contractual rights under the terms of the issue, such as the right to receive certain information. Debt securities are generally issued for a fixed term and redeemable by the issuer at the end of that term. Debt securities may be protected by collateral or may be unsecured, and, if they are unsecured, may be contractually "senior" to other unsecured debt meaning their holders would have a priority in a bankruptcy of the issuer. Debt that is not senior is "subordinated".

Equity

An equity security is a share of equity interest in an entity such as the capital stock of a company, trust or partnership. The most common form of equity interest is common stock, although preferred equity is also a form of capital stock. The holder of an equity is a shareholder, owning a

share, or fractional part of the issuer. Unlike debt securities, which typically require regular payments (interest) to the holder, equity securities are not entitled to any payment. In bankruptcy, they share only in the residual interest of the issuer after all obligations have been paid out to creditors. However, equity generally entitles the holder to a pro rata portion of control of the company, meaning that a holder of a majority of the equity is usually entitled to control the issuer. Equity also enjoys the right to profits and capital gain, whereas holders of debt securities receive only interest and repayment of principal regardless of how well the issuer performs financially. Furthermore, debt securities do not have voting rights outside of bankruptcy. In other words, equity holders are entitled to the "upside" of the business and to control the business.

Stock Hybrid

Hybrid securities combine some of the characteristics of both debt and equity securities.

Preference shares form an intermediate class of security between equities and debt. If the issuer is liquidated, they carry the right to receive interest and/or a return of capital in priority to ordinary shareholders. However, from a legal perspective, they are capital stock and therefore may entitle holders to some degree of control depending on whether they contain voting rights.

Convertibles are bonds or preferred stock which can be converted, at the election of the holder of the convertibles, into the common stock of the issuing company. The convertibility, however, may be forced if the convertible is a callable bond, and the issuer calls the bond. The bondholder has about 1 month to convert it, or the company will call the bond by giving the holder the call price, which may be less than the value of the converted stock. This is referred to as a forced conversion.

Equity warrants are options issued by the company that allow the holder of the warrant to purchase a specific number of shares at a specified price within a specified time. They are often issued together with bonds or

existing equities, and are, sometimes, detachable from them and separately tradable. When the holder of the warrant exercises it, he pays the money directly to the company, and the company issues new shares to the holder.

Warrants, like other convertible securities, increases the number of shares outstanding, and are always accounted for in financial reports as fully diluted earnings per share, which assumes that all warrants and convertibles will be exercised.

2.1.3.2 Types of Securities Market

In Nepal, the public securities markets can be divided into primary and secondary markets

a) Primary
b) secondary market

The distinguishing difference between the two markets is that in the primary market, the money for the securities is received by the issuer of those securities from investors, typically in an initial public offering transaction, whereas in the secondary market, the securities are simply assets held by one investor selling them to another investor (money goes from one investor to the other). An initial public offering is when a company issues public stock newly to investors, called an "IPO" for short. A company can later issue more new shares, or issue shares that have been previously registered in a shelf registration. These later new issues are also sold in the primary market, but they are not considered to be an IPO but are often called a "secondary offering". Issuers usually retain investment banks to assist them in administering the IPO, obtaining SEC (or other regulatory body) approval of the offering filing, and selling the new issue. When the investment bank buys the entire new issue from the issuer at a discount to resell it at a markup, it is called a firm commitment underwriting. However, if the investment bank considers the risk too great for an underwriting, it may only assent to a best effort agreement, where the investment bank will simply do its best to sell the new issue.

In order for the primary market to thrive, there must be a secondary market, or aftermarket which provides liquidity for the investment security, where holders of securities can sell them to other investors for cash. Otherwise, few people would purchase primary issues, and, thus, companies and governments would be restricted in raising equity capital (money) for their operations. Organized exchanges constitute the main secondary markets. Many Capital market ha two functions: Primarily, function rising one and a secondary security transfer function. The primary markets, where securities are traded firstly, are absolutely vital to capitalistic economy, if they are furnish properly. It provides a channel of funds for those who can make the best use of them. A security market with the characteristic is said to be illocutionary efficiency. An operationally efficient market is that where the lowest possible transaction service occurs.

"The primary motive for buying a stock is to result it subsequently at a higher price. In many cases dividend will be expected also. Dividend and price changes are the principal ingredients in what investors regard as return on yield"(Fisher D., 1990:634).

“The existence of well functioning secondary market, where investors came together to trade existing securities, assures the purchase of primary securities that they can quickly sell them to securities, if the need arises." (John, 1992:48)

By providing secondary market, stock market facilitates the successful floatation of new issue. It provides the best opportunity to investors for mobilization of investible resources, it is an important intermediary, though which bridges the deficit units and surplus unit can be insured. The objective of capital mobilization is the transformation of savings on investible resources into actual investment. So, it plays a crucial role in the mobilization of a constant flow of saving and channeling these financial resources for expanding productive capacities of the country.

Liquid equity market is another aspect that is facilitated by secondary market. Liquid equity markets provide investment opportunities to investors and to make a certain asset more attractive to buyer and seller. Stock market may affect the economic activity through the creation of liquidity. Liquid equity markets make the investment less risky and more attractive. It allows the savers to acquire asset (equity) and sell it quickly and cheaply. If they need access to their savings or want to alter their portfolio, the function says, "At the same time, company enjoys permanent assess, to capital raised through equity issue. By facilitating long term and more profitable investment, liquid equity market improves allocation of capital and enhances prospects for long-term economic growth. Further by making investment less risky and more profitable, stock market liquidity can also lead to more investment." (Ross and Sara, 1993:554)

Liquid stock markets make less expensive to trade equities reduce disincentive to investing the lag duration projects because investors can easily sell, if they need their savings before the project matures. Therefore, it facilitates investment in long run, higher return projects and the best productivity growth. Stock market liquidity actually encourages a shift to higher return projects that stimulate productivity growth. Since more liquidity makes it easier to sell shares. Some argue that more liquidity reduces the incentives of shareholders to undertake the costly task of monitoring managers.

By improving liquidity, stock market provides continuous market that makes more frequent but small price changes. "Market price of stock determined by the interaction of demand and supply. Contrary one such stock at a given time that the price and volume of its past transactions are meaningful indication of problem relationship of future supply and demand pressure. It is likely to encounter in the market and that such relationship is the most important element in determining the probable direction of price movement."(Bhusan Y.K., 1990: 10)

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

a) Security exchange facilitates the investment process by providing a market place to conduct efficient and relatively in expensive transaction. Investors thus assured that they would have a place to sell securities than they would otherwise require.
b) They are capable of handling continuous transaction testing the values of securities. The purchase of selling securities records judgments and the values and prospects of the companies. Those prospects are judged favorably by the investment community have higher values which facilitates the new financing and growth.
c) Securities are relatively more stable because of the operation of the security markets. Security market improves liquidity by providing continuous markets that make more frequent but smaller price changes. In the absence of active market price changes are less frequent and more violent.
d) Security markets aid the digestion of new security issues and facilitate their successful floatation.

Above functions elaborate the aggregate concept of stock market and sock exchange activities. Investors are not interested to invest in new securities, if they had to hold up to maturity periods. Actually stock market provides well functioning secondary market to trade existing securities and assures the purchase of primary securities that they can quickly sell their securities, if the need arises. Stock market also affects economy through creation of liquidity. Only liquid equity markets make the investment less risky and more attractive. It allows saver to acquire an asset and sell quickly and cheaply. The regular inspection in secondary market is also necessary from company side; it helps to attract investment community. Similarly an active stock market has less but frequent price change because it has an efficient market mechanism and information's are quickly disseminated to all investors." (Weston and Copland, 1995: 720)

As already mentioned, primary markets are absolutely vital to capitalist economy. Without secondary market, primary market would not function properly. Savers would be reluctant to invest in the new securities if they had to hold up to maturities or large cost of funding of the sellers.

The existence of well functioning market refers to liquidity, profitability and diversification of securities to minimize risk. It provides adequate trade off between risk and return for investor, financial institutions to purchase and sale of securities. Traditionally security exchange is referred as both primary and secondary market where securities are initially sold first of all to institution and then free to resell through exchange. So new issue market is thus separate from stock exchange dealing system. That is why this study is only concerned with stock market secondary function i.e., the stock exchange, the individual and institutions are functioning by reselling the securities through exchange process.

In Nepal, Nepal Stock Exchange (NEPSE), a non-profit organization provides the market place in which the firms can raise funds through the sale of new securities and purchasers of securities can easily resell them when necessary. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through members, market intermediaries such as brokers, market makers, etc. His Majesty's Government, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

2.2. Capital Market Efficiency

The degree to which the present asset price accurately reflects current information in the market place Market efficiency is another most profound idea to affect the investment decision process in security markets, mainly in equity markets. An analysis of the efficiency of capital markets. This looks at how fair current market prices are for an asset given current market situations. For example, if major news breaks out for a company, an analysis would occur on the stock's price to see how it should be valued given the news. Capital market efficiency measures the extent of the accuracy of the stock's price. Efficiency means efficiently priced markets in which price of securities does not depart from justified economic values for securities which are determined by investors future expectation about risk earnings and so on. The efficient market hypothesis (EMH*)* implies that if new information is revealed about a firm it will be incorporated into

the share price rapidly and rationally, with respect to the direction of the share price movement and the size of that movement. In finance, the efficient-market hypothesis (EMH) asserts that financial markets are "informationally efficient", or that prices on traded assets (*e.g.*, stocks, bonds, or property) already reflect all available information, and instantly change to reflect new information.

The efficient-market hypothesis was developed by Professor Eugene Fama at the University of Chicago Booth School of Business as an academic concept of study through his published Ph.D. thesis in the early 1960s at the same school. It was widely accepted up until the 1990s, when behavioral finance economists, who were a fringe element, became mainstream

"An Efficient Market (EM) is defined as one in which the price of security fully reflects all known information quickly and accurately." (Johns, 1992:425)

"An efficient market is one where a security's current price gives the best estimate of its time watch. In an efficient market, there are higher free launches non-expensive dinner. It is not possible to systematically gain or lose profits from trading on the available public information."(Weston and Copland, 1995: 731)

"Efficient market is that, there are large number of knowledgeable and profit maximizing independent buyers and sellers, new information is generated randomly and investors adjust the information rapidly."(Sharpe, 1998:15)

All these definitions are related to information efficiency. Finally, we can say that information dissemination in market plays a significant role to estimate the market price of securities. Rapid and accurate adjustment of information system has signified more efficient market and only possible to earn normal profits and normal gain. The subject of market efficiency has been much concerned area of the study in recent time. The efficient markets are not only related to informational efficiency

but also allocational, operational efficiency etc. Allocational efficiency signifies, that rate of return adjusted the risk that are equated the margin for all investors. At time minimum transferred cost of investment funds refers operationally efficiency.

According to CP Johns "efficient market can exist if the following events occur:

- A large number of knowledgeable profit maximizing investors exist who actively participate in the market by analyzing valuing and trading stocks. These investors are price taking that is one participant alone cannot affect the price of the securities.
- Information is costless and widely available to market participants at approximately the same time.
- Information is generated in a random fashion such that announcements are basically independent of one another. Investors react quickly and accurately to the new information causing stock price to adjust accordingly.
- Investors react quickly and accurately to the new information causing stock price to adjust accordingly. (Johns, 1998:427)

If above conditions meet in practice, the investors adjust security price rapidly and accurately as information carrying into the market price changes are independent in each other and also more random fashion. The price change of today is independent as compared to yesterday because investors react to the new information independently in the market today. The question exists, after achieving the efficient market, that how efficient exists and which is implied for investors. The "How" question is related to form of market efficiency and “what" question is related to implication of market efficiency.

If capital markets are efficient, then the current share price of a company is 'fair'. There is no question of the share price being under or over-valued. The phenomenon of under or over-valuation of shares is possible only in an inefficient capital markets.

In an efficient market no trader will be presented with an opportunity for making a return on a share (or other security) that is greater than a fair return for the riskiness associated with that share (or any other security). The absence of abnormal profit possibilities arises because current and past information is immediately reflected in current prices. It is only new information, which causes prices to change.

In the major stock markets of the world prices are set by forces of supply and demand. There are hundreds of analysts and thousands of traders, each receiving new information on a company through electronic and paper media. The moment an unexpected, positive piece of information leaks out investors will act and prices will rise rapidly to a level that gives no opportunity to make further profit.

2.2.1Types of Efficiency

Efficiency is an ambiguous word and therefore we have to establish some clarity. There are three types of efficiency;

1**. Operational efficiency** – refers to the cost to buyers and sellers of transactions in securities on the exchange. It is desirable that the market carries out its operations at as low a cost as possible. This may be promoted by creating as much competition between market makers and brokers as possible so that they earn only normal profits and not excessively high profits. It may also be enhanced by competition between exchanges for secondary-market transactions.

2. **Allocation efficiency** – society has a scarcity of resources (that is, they are not infinite) and it is important that we find mechanisms, which allocate those resources to where they can be most productive. Those industrial and commercial firms with the greatest potential to use investment funds effectively need a method to channel funds their way. Stock markets help in the process of allocating society's resources between competing real investments. For example, an efficient market provides vast funds for fast-growth sectors such as electronics, pharmaceuticals and biotechnology industries (through new issues, rights issues, etc.) but allocates only small amounts for slow-growth industries.

3. **Pricing efficiency** – in a pricing efficient market the investor can expect to earn merely a risk-adjusted return from an investment as prices move instantaneously and in an unbiased manner to any news. It is pricing efficiency that is the focus of this section and the term efficient market hypothesis applies to this form of efficiency only.

2.2.2 The Value of an Efficient Market

It is important that stock/share markets are efficient for at least three reasons:

1. To encourage share buying – accurate pricing is required if individuals are going to be encouraged to invest in private enterprise. If shares are incorrectly priced many savers will refuse to invest because of a fear that when they come to sell the price may be perverse and may not represent the fundamental attractions of the firm. This will seriously reduce the availability of funds to companies and inhibit growth. Investors need to know they are paying a fair price and that they will be able to sell at a fair price – that the market is a "fair game".

2. To give correct signals to company managers – Since the maximization of shareholder wealth can be represented by the share price in an efficient market, sound financial decision-making relies on the correct pricing of the company's shares. In implementing a shareholder wealth-enhancing decision the manager will need to be assured that the implication of the decision is accurately signaled to shareholders and to management through a rise in the share price. It is important that managers receive feedback on their decisions from the share market so that they are encouraged to pursue shareholder wealth strategies.

3. To help allocate resources – allocation efficiency requires both operating efficiency and pricing efficiency. If a poorly run company in a declining industry has highly valued shares because the stock market is not pricing correctly then this firm will be able to issue new shares, and thus attract more of society's savings for use within its business. This would be wrong for society as the funds would be better used elsewhere.

2.2.3 Forms of Capital Market Efficiency

Economists have defined different levels of efficiency according to the type of information, which is reflected in prices. Three levels of market efficiency can be identified. Three forms of capital market efficiency may be distinguished:

1. Weak form of efficiency:

The security prices reflect all past information about the price movements in the weak form of efficiency. It is, therefore, not possible for an investor to predict future security price by analyzing historical prices, and achieve a performance (return) better than the stock market index. It is so because the capital market has no memory, and the stock market index has already incorporated past information about the security prices in the current market price. It is pointless basing trading rules on share price history, as the future cannot be predicted in this way.

A Weak-form Efficiency Test Example: Technical analysts employ a vast range of trading rules. Some recommend buying shares that have performed well relative to the rest of the market, maintaining that their performance will continue in that vein. Others advise a purchase when a share rises in price at the same time as an increase in trading volume occurs. Overwhelmingly the evidence and weight of academic opinion is that the weak form of the EMH is to be accepted. The history of share prices cannot be used to predict the future in any abnormally profitable way.

2. Semi-strong form of efficiency:

In the semi-strong form of efficiency, the share prices fully reflect all the relevant publicly available information. This includes not only past price movements but also earnings and dividend announcements, rights issues, technological breakthroughs, resignations of directors, and so on. The semi-strong form of efficiency implies that there is no advantage in analyzing publicly available information after it has been released, because the market has already absorbed it into the priceThis implies that an investor will not be able to outperform the market by analyzing the

existing company-related or other relevant information available in, say, the annual accounts, or financial dailies/magazines (e.g. The Economic Times). In fact such publicly available information is already impounded in the current security prices.

The semi-strong efficient market hypothesis implies that the share price reflects an event or information very quickly, and therefore, it is not possible for an investor to beat he market using such information.

A Semi-strong form Efficiency Test Example: The semi-strong form tests focus on the question of whether it is worthwhile expensively acquiring and analyzing publicly available information. If semi-strong efficiency is true it undermines the work of millions of fundamental (professional or amateur) analysts whose trading rules cannot be applied to produce abnormal returns because all publicly available information is already reflected in the share price.

Fundamental analysts try to estimate shares' true value based on future returns. These are then compared with the market price to establish an over- or under valuation. To estimate the intrinsic value of a share the fundamentalists gather as much relevant information as possible. This may include:

- macroeconomic growth projections,
- industry conditions,
- company accounts and announcements,
- details of company's personnel, tax rates,
- Technological and social change and so on.

The range of potentially important information is vast, but it is all directed at one objective: forecasting future profits and dividends. Some evidence for and against the semi-strong form of market efficiency has been discovered in the following:

1. **Information announcements:** This concerns the issue of whether trading in shares immediately following announcements of new

information (for example announcements on dividends or profit figures) could produce abnormal returns. The evidence supports the EMH, and excess returns are nil. It has been discovered that most of the information in annual reports, profit or dividend announcements are reflected in share prices before the announcement is made.

2. **Stock splits***:* Stock splits imply that existing shareholders receive more shares in proportion to their existing holding. Because no new money is raised for the firm, and the fundamentals of the business such as cash flows are unchanged, prices should not react purely to a stock split. However, the split itself is an insignificant part of the information given to the market around the time of the announcement, as splits tend to occur when firms are doing well. The split is often taken as a final confirming signal that the firm anticipates continued growth and that dividends will rise. Fama et. al. (1969) showed that share prices rise by an abnormal amount relative to the market prior to the split.

3. **Manipulation of earnings***:* Published accounts are an important source of information about companies. An efficient market will incorporate this information into share prices. But, as is well known, there is a great deal of leeway when it comes to drawing up accounts. One way of altering accounts is to openly and honestly reflect the changing underlying economies of the business by changing, say, the depreciation policy.

If this is taken a stage further we have creative accounting, which obeys the letter of the law and accounting body rules but involves the manipulation of the accounts to show the most favorable profit figures and balance sheet. Finally, there is outright fraud and lies. The conclusion of efficiency in this case seems reasonable because investors are aware of the nature of the accounting change, but doubts have been raised about market efficiency if there is wholesale creative accounting.

3. Strong form of efficiency:

In the strong form of efficiency, the security prices reflect all relevant information, including that which is privately held, is reflected in the share price. Here the focus is on insider trading, in which a few privileged individuals (for example directors) are able to trade in shares, as they know more than the normal investor in the market. In a strong-form efficient market even insiders are unable to make abnormal profits (note that the market is acknowledged as being inefficient at this level of definition).

A Strong form Efficiency Test Example: It is well known that it is possible to trade shares on the basis of information not in the public domain and thereby make abnormal profits. In this respect stock markets are not strong form efficient. Trading on inside knowledge is thought to be a “bad thing”. It makes those outside of the charmed circle feel cheated. A breakdown of the fair game perception will leave some investors feeling that the inside traders are making profits at their expense. If they start to believe that the market is less than a fair game they will be more reluctant to invest and society will suffer. To avoid the loss of confidence in the market most stock exchanges attempt to curb insider dealing and it is a criminal offence for most exchanges (if not all). Insider trading is considered to be, besides dealing for oneself, either counseling or procuring another individual to deal in the securities or communicating knowledge to any other person, while being aware that he or she (or someone else) will deal in those securities.

2.2.4 Misconceptions about the Efficient Market Hypothesis

There are three classic misconceptions:

1. Any share portfolio will perform as well as or better than a special trading rule designed to outperform the market. A monkey choosing a portfolio of shares from the “Financial Times” for a buy and hold strategy is nearly, but not quite, what the EMH advocates suggest as a strategy likely to be as rewarding as special inefficiency-hunting approaches. The monkey does not have the financial expertise needed to construct broadly based portfolios, which fully diversify

away unsystematic risk. A selection of shares in just one or two industrial sectors may expose the investor to excessive risk. So it is wrong to conclude from EMH evidence that it does not matter what the investor does, and that any portfolio is acceptable. The EMH says that after first eliminating unsystematic risk by holding broadly based portfolios and then adjusting for the residual systematic risk, investors will not achieve abnormal returns.

2. There should be fewer price fluctuations. If shares are efficiently priced why is it that they move every day even when there is no announcement concerning a particular company? This is what we would expect in an efficient market. Prices move because new information is coming to the market every hour, which may have some influence on the performance of a specific company. For example, the governor of the Central bank may hint at an interest rate rise, or the latest industrial output figures may be released, etc.

3. Only a minority of investors is actively trading, most are passive therefore efficiency cannot be achieved. This too is wrong. It only needs a few trades by informed investors using all the publicly available information to position (through their buying and selling actions) a share at its semi-strong-form efficient price.

2.2.5 Implications of the Efficient Market Hypothesis

The efficient market hypothesis has a number of implications for both the investors and the companies.

For Investors

For the vast majority of people public information cannot be used to earn abnormal returns (that is, returns above the normal level for that systematic risk class). The implication is that fundamental analysis is a waste of money and that so long as efficiency is maintained the average investor should simply select a suitably diversified-portfolio, thereby avoiding costs of analysis and transaction. Investors need to press for a greater volume of timely information. Semi-strong efficiency depends on

the quality and quantity of publicly available information, and so companies should be encouraged by investor pressure, accounting bodies, government rulings and stock market regulation to provide as much as is compatible with the necessity for some secrecy to prevent competitors gaining useful knowledge. The perception of a fair game market could be improved by more constraints and deterrents placed on insider dealers.

For Companies

The EMH also has a number of implications for companies: Focus on substance, not on short-term appearance: Some managers behave as though they believe they can fool shareholders. For example creative accounting is used to show a more impressive performance than is justified. Most of the time these tricks are transparent to investors, who are able to interpret the real position, and security prices do not rise artificially.

There are some circumstances when the drive for short-term boosts to reported earnings could be positively harmful to shareholders. For example, one firm might tend to overvalue its stock to boost short-term profitability, another might not write off bad debts. These actions will result in additional, or at least earlier, taxation payments, which will be harmful to shareholder wealth. Managers, aware that the analysts often pay a great deal of attention to accounting rate of return, may, when facing a choice between a project with a higher NPV but a poor short-term ARR, or one with a lower NPV but higher short-term ARR, choose the latter.

The timing of security issues does not have to be fine-tuned: Consider a team of managers contemplating a share issue who feel that their shares are currently under-priced because the market is low. They opt to delay the sale, hoping that the market will rise to a more “normal level”. This defies the logic of the EMH – if the market is efficient the shares are already correctly priced and it is just as likely that the next move in prices will be down as up. The past price movements have nothing to say about future movements.

The situation is somewhat different if the managers have private information that they know is not yet priced into the shares. In this case if the directors have good news then they would be wise to wait until after an announcement and subsequent adjustment to the share price before selling the new shares. Bad news announcements are more tricky – to sell the shares to new investors while withholding bad news will benefit existing shareholders, but will result in loss for the new shareholders.

2.3 Theories of Stock Price Behavior

The forces of demand and supply interact to determine a stock price. If demand is high and supply is low then price of stock goes up and vice-versa. Broadly there are three schools of thought concerning the valuation of securities and their price behavior.

- Technical Analysis.
- Fundamental Analysis.
- Random Walk or Efficient Market Analysis.

1. Technical Analysis

The technical analysis theory of share price behavior is based on past market information. Technical analysts seek to identify price patterns and trends in financial markets and attempt to exploit those patterns. While technicians use various methods and tools, the study of price charts is primary.This theory includes the study of the past price and value date of stocks to forecast future price movement.

The principles of technical analysis derive from the observation of financial markets over hundreds of years. The oldest known hints of technical analysis appear in Joseph de la Vega's accounts of the Dutch markets in the 17th century. In Asia, the oldest example of technical analysis is thought to be a method developed by Homma Munehisa during early 18th century which evolved into the use of candlestick techniques, and is today a main charting tool. Dow Theory is based on the collected writings of Dow Jones co-founder and editor Charles Dow, and inspired the use and development of modern technical analysis from the end of the 19th century. Other pioneers of analysis techniques include Ralph Nelson Elliott and William Delbert Gann who developed their respective techniques in the early 20th century.

Many more technical tools and theories have been developed and enhanced in recent decades, with an increasing emphasis on computer-assisted techniques.

"A highly specialized form of market is practical by technical analyst. They try to predict future stock price as we might predict that the pattern of wall paper behind the mirror is the same as the pattern above the mirror." (Malkiel B. G.: 1981).

Technical analysis is based on widely accepted premise that security prices are determined by the supply and demand of securities. Tools of technical analysis are designed to measure the supply and demand. Technical analyst records historical financial data on charts and studies

these charts in an effort and find meaningful patterns to predict future prices. Some basic assumptions underlying technical analysis theory are

- Price is determined by interaction of demand and supply.
- Demand and supply are governed by numerous factors, both rational and irrational.
- Series of prices contain trends in that persist for appreciable length of time.
- Changes in trends are caused by shifts in demand and supply.
- The pattern tends to repeat itself.

Technical analysts also extensively use indicators, which are typically mathematical transformations of price or volume. These indicators are used to help determine whether an asset is trending, and if it is, its price direction. Technicians also look for relationships between price, volume and, in the case of futures, open interest. Examples include the relative strength index, and MACD. Other avenues of study include correlations between changes in options (implied volatility) and put/call ratios with price. Other technicians include sentiment indicators, such as Put/Call ratios and Implied Volatility in their analysis.

Technicians seek to forecast price movements such that large gains from successful trades exceed more numerous but smaller losing trades, producing positive returns in the long run through proper risk control and money management.

There are several schools of technical analysis. Adherents of different schools (for example, candlestick charting, Dow Theory, and Elliott wave theory) may ignore the other approaches, yet many traders combine elements from more than one school. Some technical analysts use subjective judgment to decide which pattern a particular instrument reflects at a given time, and what the interpretation of that pattern should be. Some technical analysts also employ a strictly mechanical or systematic approach to pattern identification and interpretation.

Technical analysis is frequently contrasted with *fundamental analysis*, the study of economic factors that influence prices in financial markets. Technical analysis holds that prices already reflect all such influences before investors are aware of them, hence the study of price action alone. Some traders use technical or fundamental analysis exclusively, while others use both types to make trading decisions.

Users of technical analysis are most often called technicians or market technicians. Some prefer the term technical market analyst or simply market analyst. An older term, chartist, is sometimes used, but as the discipline has expanded and modernized the use of the term chartist has become less popular

Characteristics

Technical analysis employs models and trading rules based on price and volume transformations, such as the relative strength index, moving averages, regressions, inter-market and intra-market price correlations, cycles or, classically, through recognition of chart patterns.

Technical analysis stands in contrast to the fundamental analysis approach to security and stock analysis. Technical analysis "ignores" the actual nature of the company, market, currency or commodity and is based solely on "the charts," that is to say price and volume information, whereas fundamental analysis does look at the actual facts of the company, market, currency or commodity. For example, any large brokerage, trading group, or financial institution will typically have both a technical analysis and fundamental analysis team.

Technical analysis is widely used among traders and financial professionals, and is very often used by active day traders, market makers, and pit traders. In the 1960s and 1970s it was widely dismissed by academics. In a recent review, Irwin and Park reported that 56 of 95 modern studies found it produces positive results, but noted that many of the positive results were rendered dubious by issues such as data snooping so that the evidence in support of technical analysis was inconclusive; it is

still considered by many academics to be pseudoscience. Academics such as Eugene Fama say the evidence for technical analysis is sparse and is inconsistent with the weak form of the efficient market hypothesis. Users hold that even if technical analysis cannot predict the future, it helps to identify trading opportunities.

In the foreign exchange markets, its use may be more widespread than fundamental analysis. While some isolated studies have indicated that technical trading rules might lead to consistent returns in the period prior to 1987, most academic work has focused on the nature of the anomalous position of the foreign exchange market. It is speculated that this anomaly is due to central bank intervention. Recent research suggests that combining various trading signals into a Combined Signal Approach may be able to increase profitability and reduce dependence on any single rule.

2. Fundamental Analysis

Fundamental analysis of a business involves analyzing its financial statements and health, its management and competitive advantages, and its competitors and markets. When applied to futures and forex, it focuses on the overall state of the economy, interest rates, production, earnings, and management. When analyzing a stock, futures contract, or currency using fundamental analysis there are two basic approaches one can use; bottom up analysis and top down analysis.

The top-down investor starts his analysis with global economics, including both international and national economic indicators, such as GDP growth rates, inflation, interest rates, exchange rates, productivity, and energy prices. He narrows his search down to regional/industry analysis of total sales, price levels, the effects of competing products, foreign competition, and entry or exit from the industry. Only then he narrows his search to the best business in that area.

The bottom-up investor starts with specific businesses, regardless of their industry/region.

In the fundamental approach, the analyst is primarily interested in analyzing factors such as economic influences, industry factors and related information of the company. Fundamental analysis includes: 1.Economic analysis 2.Industry analysis 3.Company analysis

On the basis of this three analysis the intrinsic value of the shares are determined. This is considered as the true value of the share.

"The value of the common stock is simply the present value of all the future income which the owner of the share will receive."(J.C. Francis: 1993)

"If the intrinsic value is below the market price, the security should be sold before its price drops. Under priced stock is purchased until their prices are bid to equal their value and overpriced stocks are sold, which drives the price down until it equals the value." (J.C. Fransis: 1993).

If the intrinsic value is higher than the market price it is recommended to buy the share . If it is equal to market price hold the share and if it is less than the market price sell the shares. The shareholders would like to maximize the return by buying the shares of the under-valued company and selling shares of the over-valued company. Buying pressure would increase the price of the under-valued company and selling pressure would decrease the price of over-valued company until the equilibrium price is restored. The principle decision variables ultimately take the form of earning and dividend. The fundamentalist makes a judgment of stocks value with risk return framework based upon earning power and the economic environment.

Fundamental analysis is performed on historical and present data, but with the goal of making financial forecasts. There are several possible objectives:

- to conduct a company stock valuation and predict its probable price evolution,
- to make a projection on its business performance,
- to evaluate its management and make internal business decisions,

- to calculate its credit risk.

Investors may use fundamental analysis within different portfolio management styles.

- Buy and hold investors believe that latching onto good businesses allows the investor's asset to grow with the business. Fundamental analysis lets them find 'good' companies, so they lower their risk and probability of wipe-out.
- Managers may use fundamental analysis to correctly value 'good' and 'bad' companies. Even 'bad' companies' stock goes up and down, creating opportunities for profits.
- Managers may also consider the economic cycle in determining whether conditions are 'right' to buy fundamentally suitable companies.
- Contrarian investors distinguish "in the short run, the market is a voting machine, not a weighing machine. Fundamental analysis allows you to make your own decision on value, and ignore the market.
- Value investors restrict their attention to under-valued companies, believing that 'it's hard to fall out of a ditch'. The value comes from fundamental analysis.
- Managers may use fundamental analysis to determine future growth rates for buying high priced growth stocks.
- Managers may also include fundamental factors along with technical factors into computer models (quantitative analysis).

3. Random Walk Efficient Market Theory

Early in the past century, statisticians noticed that changes in stock prices seem to follow a fair game pattern. This has led to the random walk hypothesis, 1st espoused by French mathematician Louis Bachelier in 1900, which states that stock prices are random, like the steps taken by a drunk, and therefore are unpredictable.

A few studies appeared in the 1930’s, but the random walk hypothesis was studied—and debated—intensively in the 1960’s.The

random walk theory assumes that all future streams of incomes from the equity investment are independent of preceding income. In other words, future prices cannot be predicted on the basis of past price behavior. The share prices fluctuate randomly, however this does not mean that the market is irrational in the determination of prices. It operates through market mechanism. In a free and competitive market, the relative forces of demand and supply determine the share price. The so-called efficient market automatically adjusts the prices of shares since the market is very sensitive. Any discrepancies in the market are automatically corrected and the actual prices fluctuate randomly about its intrinsic value. This is a free and most competitive market and the prices of shares in the market are assumed to reflect all relevant information. It states that financial markets are efficient and that prices already reflect all known information concerning a stock or other security and those prices rapidly adjust to any new information. Information includes not only what is currently known about a stock, but also any future expectations, such as earnings or dividend payments. It seeks to explain the random walk hypothesis by positing that only new information will move stock prices significantly and since new information is presently unknown and occurs at random, future movements in stock prices are also unknown and, thus, move randomly.

Economists would say that stocks and other security prices are the result of the equilibrium of supply and demand—however, it is actually the instantaneous supply and demand that determines actual prices, and at any given time, the supply and demand will differ simply due to chance.

For instance, suppose, on a particular day, that you have 100 investors who want to buy a particular stock and 100 investors who want to sell the same stock, and suppose further that they believe that the opening market price to be a fair price and they place market orders to effect their trades—and these traders are not aware of any news about the company during the course of the day. I think you will agree that there is very little chance that these traders will all come to market at the same time, even on the same day, and if some of them do happen to trade at the same time, the number of buyers and sellers probably will not be equal, and that whether

there are more buyers than sellers or vice versa will differ throughout the day. Hence, at most times of the day, there will be an instantaneous imbalance of supply and demand for the stock, which will cause the stock price to move seemingly randomly throughout the day. I say seemingly, because even though the stock price is determined by the instantaneous supply and demand of the stock, no one can know what that equilibrium price will be ahead of time.

The proof of this explanation can be observed by the fact that even when there is no news about a particular company, its stock will walk randomly throughout the day because the instantaneous supply and demand will vary randomly throughout the day.

It is true that news moves the markets, and that this news is mostly unpredictable, at least by most traders—hence, some randomness will be created by news events. But even when there is news about a particular company that will move its stock price significantly, the response will still have some randomness, because different traders with different amounts of capital will learn about it at different times, and there will probably be limit and stop-loss orders triggered as the stock price changes significantly, thereby causing the stock to zigzag up or down. Furthermore, how much will the price move because of the news? Different traders will have different opinions as to how much the news is worth. If the news was good, for instance, then some traders will buy more because they believe that the stock price hasn't reached its top; others will sell because they believe that the price has overshot its top, and these traders will trade at different times.

2.4 Economic liberalization and capital market development.

The actions taken by a government to influence its economy is called economic policy. Types of economic policy actions can include setting interest rates through a federal reserve, regulating the level of government expenditures, creating private property rights, and setting tax rates.

A vigorous macroeconomic environment sustained by favorable economic policies primary to increased savings and investments is the qualification for a stable and healthy growth of capital markets. In many emerging markets, privatization of state owned enterprises has played a crucial role in promoting capital markets. Privatized enterprises have constituted a significant portion of most important issues in Nepal. Ultimately, the status of capital markets is a reflection of the state of economic growth of the country.

As a precondition to economic liberalization, the industrial enterprise act was enacted in 1982 and Foreign Investment and Technology Transfer Act came into effect since 1983. Since 1985 Nepal has been following liberal economic policy. In its first stage of implementation, banking and financial sector was liberalized. A policy to invite foreigners to invest jointly with the domestic investors in the banking and financial sector was introduced. Finance Companies Act 1986 was also enacted with a view to provide non-banking securities to the people in order to promote their economic benefit in general through institutionalized investment. Accordingly, many banks and finance companies were incorporated in the private sector and listed in the securities exchange center. Nepal Rastra Bank liberalized the regulation of interest rate and endeavored to reform and strengthen the financial sector by implementing various prudential financial norms like income recognition, loan classification, maintenance of adequate loan loss provisions, reserves and capital adequacy ration and liquidity position of the banks and finance companies. The Industrial Policy of 1988 introduced various reforms in order to encourage the establishment of corporate enterprises and guaranteed the non-nationalization of private sector industrial organizations.

In August 1988, Nepal was hard hit by major earthquake resulting in considerable loss of lives and properties. Nepal- India trade and transit treaty came to an end on March 1989 and the country underwent ore than a year long trade impasse with India which caused temporary set bank to the capital market too. Most of the trade points with India were closed down and because of the short supply of fuel and other essential industrial inputs,

the operation of most of the industries was disrupted. After the restoration of multiparty democracy in 1990 and resumption of the trade and transit stalemate with India in its status quo ante, new democratic constitution was enacted, which enshrined in its directive principles the previous conducive to the private sector growth. The multiparty election took place in April 1991 and the elected government while taking the steering of the economy realized the need to reform the financial sector and develop capital market along with the economic liberalization in the country for private sector growth. The multiparty election took place in April 1991 and the elected government while taking the steering of the economy realized the need to reform the financial sector and develop capital market along with the economic liberalization in the country for private sector growth towards this move, more joint venture companies were opened in the country and Citizen Investment Trust was established as a pioneering market maker institution in the capital market.

2.5 Monetary Policy Implications on Capital Market Development

Monetary policy is one of the important macroeconomic policies through which the monetary authority of a country controls the supply of money, availability of money, and rate of interest in order to attain a set of objectives oriented towards the growth and stability of the economy. Monetary policy is referred to as either being an expansionary or a concretionary; where the former increases the total supply of money in the economy, and the later decreases the supply of money. Monetary policy rests on the relationship between the rates of interest in an economy, that is the price at which money can be borrowed, and the total supply of money. Monetary policy uses a variety of tools to control one or both of these, to influence outcomes like economic growth, inflation and exchange rates with other currencies and unemployment. Monetary policy can be implemented by changing the size of the monetary base. This directly changes the total amount of money circulating in the economy. A central bank can use open market operations to change the monetary base. The central bank has the ability to alter the money supply and thus influence the interest rate. The primary tool of monetary policy is open market

operations. This entails managing the quantity of money in circulation through the buying and selling of various credit instruments, foreign currencies or commodities, but in case of Nepal only with domestic currency through the auction of different treasury bills in the market. All of these purchases or sales result in more or less base money entering or leaving market circulation. Usually, the short-term goal of open market operation is to achieve a specific short-term interest rate target. The other primary means (instruments) of conducting monetary policy include: (i) Discount rate (Bank Rate), (ii) Changes in the Reserve Requirement (CRR), (iii) Open Market Operations (OMO) and (iv) Moral suasion. The different types of policies are also called monetary regimes, in parallel to exchange rate regime, as follows:

Table 2.2 Policies Parallel To Different Monetary Regimes

Monetary Policy	Target Market Variable	Long Term Objective:
Inflation Targeting	Interest rate on overnight debt	A given rate of change in the price
Price Level Targeting	Interest rate on overnight debt	A specific price or inflation number
Monetary Aggregates	The growth in money supply	A given rate of change in the price
Mixed Policy	Usually interest rates	Usually unemployment + CPI change
Fixed Exchange Rate	The spot price of the currency	The spot price of the currency

After the restoration of multiparty democracy in the country, it was realized that economic development of the nation was not possible without the increased participation of the private sector. With the adoption of liberal economy policy, the newly elected government followed by the policy of privatization of industrial and commercial undertakings retaining the public utility enterprises under its control. The government recognized the need of dynamic capital market in order to meet the increased demand of capital for the private sector. Toward this end, suitable monetary policy moves were undertaken by Nepal Rastra Bank.

Commercial banks and financial institutions enjoyed complete freedom to determine their own interest rates on lending and borrowing with effect from FY 1989/90. Before that, NRB used to determine the maximum interest rates on credit and minimum interest rates on deposits for commercial banks and financial institutions. As a move towards financial sector reforms, NRB took various policy decisions such as increasing banks' capital structure, classification of loans, loan loss provisioning, recognition of income and establishment of ceiling for individual credit. The capacity of commercial banks to channel their resources to the private sector had improved due to the lowering of statutory ratio from 24 percent to 22 percent. NRB continued to hold auction sales of government treasury bills on a regular basis. Along with the improvement in the financial sector, additional joint venture banks, finance companies and insurance companies had also come into existence. NRB in an effort to maintain the price stability to an acceptable level had issued bonds worth Rs. 4 billion. This squeeze in excessive liquidity had been helpful in easing the domestic inflation NRB continued to issue bonds occasionally to absorb excessive liquidity.

NRB abolished the mandatory requirement of commercial banks to invest 22 percent of total deposit liability on government bonds, treasury bills or NRB Bonds with effect from 16 July 1993. At the same time, it also lowered its refinance rates from 13 percent to 11 percent. All these moves were directed towards the release of adequate fund to the private sector. Development of capital market in Nepal had then become imperative because of ongoing structural reforms in the economy, increased participation of private sector and the growing demand for capital.

A brief highlights on Monetary Policy of Nepal for 2008/09

The stance, priority of economic objectives and instruments of the monetary policy of 2008/09 had been chosen based on the analysis of the domestic economic outlook, international economic and financial developments and their likely impacts on the Nepalese economy. With a

view to enhance transparency, the inclusions of annual financial as well as external sector reform programs had also been continued in the monetary policy of 2008/09. The monetary policy of 2008/09 had been designed in a way to ensure consistency with the budget speech of the GON announced on September 19, 2008.

Policy Stance

- Due to urbanization, the increased exposure of banks and financial institutions and elevated level of remittances have contributed to a surge in real estate prices. As the banks and financial institutions provide loans against the market value of land and building as collateral, a bubble in the real estate market directly affects the banking sector. Monetary policy stance for 2008/09 has taken note of this development in the real estate market driven by substantial flow of banking credit to this sector.
- Soaring inflation has remained a major challenge for macroeconomic management. As mentioned above, inflation has been a major economic problem not only in Nepal but also throughout the world. Containing inflation through the monetary policy measures has become a matter of public concern.
- As stated before, escalation in the prices of food grains and fuel is the main reason for inflation in Nepal. In such a situation, controlling inflation through monetary policy measures has become a debatable issue. In addition, price movement in Nepal, to some extent, is transmitted from India due to the fixed exchange rate of Nepalese rupee with Indian rupee. Both tradable and non-tradable goods and services are included in the consumer price index. Since the price of tradable goods is influenced by international prices, some argue that the efficacy of monetary policy in Nepal is limited only to the non-tradable goods and services. Against this background, it is also necessary to examine the rationale for determining the monetary policy stance for controlling inflation.
- In a situation where pressure on prices still exists and excessive monetary expansion could raise the prices of non-tradable goods and

services, it is necessary to adopt a cautious monetary policy stance. This implies that there should not be the case of monetary easing in the face of rising prices.

- Volatility in equity prices on account of excessive monetary expansion adversely affects the banking sector in particular and the economy in general. Excessive exposure of banks and financial institutions to the share market leads to a bubble. When the bubble busts, the non-performing loan (NPL) rises, leading to a banking crisis. Under such circumstances, the NRB's objective of maintaining the banking sector's soundness and stability is thwarted. Moreover, volatility in equity price does not help for sustainable development of the stock market. In this situation, there will not be the environment for investors to mobilize resources through the stock market. For this reason, the NRB slashed the ceiling for margin lending from August 2007. Therefore, the financial market situation has also been taken into account while choosing the stance of monetary policy for 2008/09.

2.6 Fiscal Policy Announcement and the Capital Market Development

Fiscal policy is that instrument by which a government adjusts its levels of spending in order to monitor and influence a nation’s economy. Fiscal policy is based on the theories of J.M. Keynes. This theory states that governments can influence macro economic productivity levels by increasing or decreasing tax levels and public spending. The effects of any fiscal policy are not the same on everyone. Depending upon the political orientations and goals of the policy makers, a tax cut could affect only the middle class, which is typically the larger economic group. In times of economic decline and rising taxation, this same group may have to pay more taxes than the wealthier upper class. Similarly, when a government decides to adjust its spending; its policy may affect only a specific group of people. A decision to build a new bridge, for example, will give work and more income to hundreds of construction workers. A decision to spend money on building a new space shuttle, on the other hand, benefits only the

small, specialized pool of experts, which would not do much to increase aggregate employment levels. (Reem Heakal-http://investopedia.com)

The government recognized the importance of private sector to lead the role in market oriented and competitive economic activities, while its own role was to provide basic services to boost up the private sector. The budget announcement for the fiscal year 1991/92 had realized that the government's role in the industrial and other enterprise should gradually be decreased with corresponding increased participation of the private sector. Various fiscal incentives were offered by the government to the public limited companies as well as to the investors in such companies in order to augment the development of capital market in Nepal. These incentives included (SEC, 1991):

Companies, which had listed their shares in SEC, had to pay an income tax at a rate of 40 % on their profit. This rate was 5% less than that to be paid by other private sector companies.

An additional tax rebate at a rate of 5% was given to the corporate body, which has distributed at least 30% of its ownership to shareholders with a maximum of 100 shares.

Dividend income was totally exempted from taxes.

A rebate of 50% on the land registration fees was granted to the Hotels, which had acquired land for a new establishment, or for capacity expansion. Such incentive could be available only if 20% of its share was given to shareholders owning a maximum number of hundred shares.

Investment in Shares & Debentures of local companies was not included in calculation of wealth tax.

The budget speech for the fiscal year 2000/01 has given emphasis for the reform in the stock exchange regulation, simplification of settlement procedure and transparency in securities market. A revised Stock Exchange Act is proposed to be passed by the parliament. An institutional arrangement is being made for the securitization of assets like

land and building mortgaged with the commercial banks against their loans. When loans turn bad, a proposed finance company called Assets Reconstruction Company will take over the assets pledged with the commercial banks at the realizable values and issue bond to the concerned commercial bank. However the budget announcement has proposed a nominal income tax rate of 5 percent on incomes from dividend to the detriment of share market expansion.

In the first ten months of 2008/09, the total government expenditure on cash flow basis, increased by 25.7 percent to Rs.127.6 billion compar ed to an increase of 28.2 percent in the corresponding period of the previous year. Low growth rate of capital expenditure accounted for such a deceleration of total government expenditure. In the first of ten months 2008/09, recurrent expenditure increased by 26.5 percent to Rs.81.9 billion. In the corresponding period of the previous year, this expenditure had increased by 21.9 percent. Upward revision of salary of the government employees as well as an increase in non-budgetary expenditure led to such acceleration in the recurrent expenditure in the review period. in the review period, capital expenditure increased by 11.4 percent to R.s 26.0 billion in contrast to an increase of 55.6 percent in the same period of the previous year. Delay in presenting budget, lack of representatives in local bodies, delay in the formulation of programs and directives of the approved projects under New Nepal movement, delay in contrast and procurement procedures as well as uncertain and irregular power supply situation accounted for such a low growth in capital expenditure in the review period.

Coordination between Fiscal and Monetary policy

Macroeconomic policies are meant to achieve non-inflationary and stable growth. There are two major groups of policy instruments to achieve the purpose; one is related to monetary conditions and the other to fiscal conditions. Monetary instruments are employed by the central bank whereas ministry of finance employs fiscal instruments. The objectives and implications of policy measures taken by the two authorities often conflict with each other and thus call for policy coordination for effective

implementation of policy decisions to achieve the set targets. The policy coordination has to be supported by the establishment of concrete institutional and operating arrangements like monetary and fiscal coordination board but Nepal has not yet set up such type of board for this purpose. The basic rationale for the monetary and fiscal policy coordination and the associated need for institutional and operational set up or arrangements can be derive from the following interrelated objectives:

"To set internally consistent and mutually agreed targets of monetary and fiscal policies with a view to achieve non-inflationary stable growth."

To facilitate effective implementation of policy decisions to achieve the set targets of monetary and fiscal policies efficiently through mutually supportive information sharing and purposeful discussions.

"To compel both the central bank and government to adopt a sustainable economic policies for maintaining macroeconomic stability within the country.

2.7 Present Status of Stock Market in Nepal

As a result of the interplay of the above three factors, the Stock market performance in Nepal has witnessed a lot of changes In Nepalese context, history of stock market is a recent phenomenon and early stage of growth than in developed countries. By analyzing investor's preferences awareness to market mechanism and attitude to investors, blind speculation about market and stock price are found in minimum level. The attraction of investors diverted into selected profitable and higher returns sectors.

Table 2.3: Present position of stock market for the Year 2008/09

Description	Share Units (In '000)	Rs. In Million	%
1. Turnover	30547.16	21681.14	100.00
a. Commercial Banks	13301.43	12406.45	57.22
b. Finance	3552.01	2615.40	12.06
c. Hotel	95.89	18.69	0.09
d. Manufacturing & Processing	95.12	26.08	0.12
e. Other	630.82	494.39	2.28
f. Hydro Power	3612.12	890.30	4.11
g. Trading	14.65	33.49	0.15
h. Insurance	418.49	212.80	0.98
i. Development Banking	3631.81	2740.36	12.64
j. Mutual Fund	758.50	22.40	0.10
k. Preferred Stock	74.43	74.05	0.34
l. Pramotor Share	4361.90	2146.73	9.90
2. Market days	234		0.00
3. Average daily turnover	130.54	92.65	
4. Number of transactions	209091		
5. Number of Companies Traded	170		
6. Number of Companies Listed	149		
7. Total Paid Up Value of Listed Share		61140	
8. Number of Listed Securities	637868		
9. Market Capitalization		512939.07	
10. % Of Turnover To Market Capitalization			4.23
11. % Of Turnover To Paid Up Value			35.46
12. % Of Turnover Of Commercial Banks To Total Turnover			57.22

Source: www.nepalstock.com

According to the annual report of NEPSE in the year 2008/09, 170 companies are traded but the listed companies were 149 in secondary market. Out of them commercial bank have the higher position than others. Besides that, finance and insurance, development banking, trading, hotels, manufacturing and processing sectors are in the declining stage. The numbers of company listed were increased from 96, in the year 2001/02, to

149 in the year 2008/09. The numbers of company traded as well as number of transactions were increased from 69 and 42028, in the year 2001/02, to 170 and 209091in the year 2002/03. Market capitalization was also increased from Rs. 34704 million in the year 2001/02 to Rs. 512939.07 million in the year 2008/09. Percentage turnover of commercial bank to total turnover is 57.22 which shows the dependence of stock market on commercial banks.

Generally, transactions of banking sector were higher level in primary as well as secondary market rather than other sectors because banking sector provides safe and higher return than others. Though manufacturing companies play significant role in the development of the economy but they could not attract the investors in primary as well as secondary market. Due to lack of public interest, they were not able to collect enough funds from primary and secondary market. Recently, people are going to invest in capital market due to low interest rate in fixed deposit; however, these sectors are not able to take advantage from the secondary market.

2.8 Review of Related Studies

Here, it is tried to review of various international as well as Nepalese journals and books regarding the capital and stock market.

2.8.1 International Review

Various number of research studies have been performed internationally on the stock market. The findings of some of the research studies are as follows

Robert Barro (1990) reported that in the case of US, stock market variables and stock returns, can largely explain the subsequent aggregate investments. On the contrary, Morck et al (1990) suggested that in the US, the stock market on an aggregate level is not much of a predictor of future investment. Meanwhile, a study by Galeotti and Schiantarelli (1994), based on quarterly aggregate data from the non-financial corporate sector in the US, revealed that investment decisions are significantly affected by stock

price fluctuations, regardless whether the variation is due to fads or due to changes in fundamentals. On the other hand, firm- level studies typically showed that there is a very limited effect of the stock market on investment (Abel and Blanchard, 1986; Morck, Shleifer, and Vishny, 1990; Blanchard, Rhee, and Summers, 1993).

"The indicators of stock market development reflect the development of an economy. It is important to predict the course of the national economy because economic activity affects corporate profits, investor attitudes and expectations and ultimately security prices. The key for the analyst is that overall economic activity manifest itself in the behavior of stock prices- or the stock market. This linkage between economic activity and the stock market is critical."(Fisher, D.E., Jordan, R.J.; 1990; 57-59)

"The study conducted by the U.S. Department of commerce on stock prices and the business cycle, 1948-84 has found that the general correspondence between stock prices and the business cycle, where weighted moving average of a stock price index is mapped against the peaks and troughs of business cycle since 1948."(Kimpton M.H, 1985: 105-107)

"The investment decision in the stock market, coteries Paribas is a function of the prevailing market price and return to capital. By return to capital is meant the algebraic sum of increment in the value of yield."(Doodha, K.S.; 1962; 125)

Levine and Zervos (1998) analyzed by using stock market liquidity (turnover of shares and value), size (market capitalization), volatility (twelve month rolling standard deviation), integration with world markets (CAPM and APT intercept terms), and bank credit for the private (bank credit to the private sector to GDP) as predictors of economic growth, capital accumulation, improvement in productivity, and savings growth rates for forty-seven countries from 1976-93. The study reveals a positive relationship between stock market and bank development and economic

growth, capital accumulation, and productivity growth. The authors conclude that stock markets provide an easy means to trade the ownership of productive assets, which facilitates resource allocation, which, in turn, facilitates capital formation, which leads to faster economic growth.

"There are two important aspect of capital market, the raising of funds in the form of shares and debentures and trading in the securities already issued by the companies. While the first aspect is obviously most important from the point of view of economic growth, the second aspect is also of considerable importance. In fact if facilities for transfer of existing securities are abundant, the raising of new capital is considered assisted for the buyer of new issue of security is confident that whenever he wants to get cash he can find buyer without much difficulty. Thus, the liquidity of the stock market affects the raising of new capital from the market."(Kunt A. And Levin, 1996: 224)

2.8.2 National Review

The stock market of Nepal has been less subjected to investment research than their counterparts elsewhere. In Nepalese context, there is little study available about stock market behavior in small capital markets.

Some researchers have carried out some researches. One of the study conducted by *Mohan Khatiwada* about *'Securities Investment in Nepal'* in 1995 is related with stock market performance. He concluded his study with following findings:

- Nepalese stock market has no liquid and small size of market than other countries.
- Institutional base, dominating role of money market and rigid rules and regulations are main problems seen in stock market.
- Securities return is less than market return.
- Dominant roles of banking and financial institution in stock market and also management groups and majority share holders groups in company.

Similarly, another study conducted by Mr. Bharat Prasad Bhatta entitled 'dynamics of stock market'. His findings of stock market are summarized below:

- Due to lack of proper implication of government rules, policy and programme, people are not conscious well and aware about stock market.
- Stock market development indicators and economic indicators have a close relationship, the growth rate of equity capital market capitalization and turnover are higher than GDP.
- Due to underdeveloped stock market, there exist few number of stock listed in stock market, size of stock market is very low, low liquidity and low development indicators are found in stock market.

Other study conducted is "Stock Market Behavior in a Small Capital Market" by Radhe Shyam Pradhan in 1993. This study helps to provide at least some insight into stock market behavior in Nepalese context by concerning listed and traded shares in secondary market. The purpose of this study is to address the stock market equity, market value to book value, price earnings and dividends with liquidity, leverage profitability assets turnover and interest coverage. His findings of stock market are summarized below:

- Data could not be obtained on contacting the individual enterprise as they traded them confidential.
- The result indicate that larger stock have longer price earning ratio of market value to book value equity, lower liquidity, lower profitability and smaller dividends.
- Price earning ratio and dividend are more variable for smaller stocks; where as market value to book value of equity is more variable for larger stock. Larger stock also has higher leverage, lower assets turnover and lower interest coverage but there are more variables for smaller stocks than for larger stocks.
- Stock with larger market value to book value of equity has larger price earning ratio and lower dividends. These stocks also have lower

liquidity, higher leverage, lower profitability, lower turnover and lower interest coverage.

- ❖ Stock paying higher dividends have higher liquidity, low leverage, high earnings, high turnover and high interest coverage, liquidity and leverage ratio are more variable for the stock paying lower dividends while earnings assets turnover and interest coverage more variable for the stock paying higher dividends.

2.8.3 Review of Unpublished Thesis

Regarding with various unpublished dissertations, (which were prepared for the partial fulfillment of MBA and other faculties) this study is mainly concerned with recent paper about behavioral aspect of stock market.

Bharat Prasad Bhatta conducts the descriptive and analytical study about stock market "Dynamics of Stock Market". The main purpose of this study is to analyze performance and trends of stock market. It also helps to analyze market price of share, impact of secondary market on primary market and financial data of sectors such as banking, financing and insurance, manufacturing, trading and hotel sector to find out the basic objective of this study. It is based on parametric test and data based on 1985/86 to 1995/96 but sector analysis was based on 1988/89 to 1994/95. Some financial and statistical tools such as simple average, standard deviation and some ratios are used in this study. "The study focuses on the corporate time series analysis of financial parameters of various industries, belonging to the stock markets and their stock markets and their effects on the stock price and ultimately the impact on the economy. (Bhatta, 1998: 20) Only concerning with descriptive approach, the study does not give appropriate vision of stock market performance and trends. This study only analyzes some financial parameters such as EPS, DPS, NPS, SPS, MPS and same price and profitability ratio. As rational investor, one should mostly concern with risk and return of markets and prospective portfolios. So the risk and return concept have a significant implication in investment decision, but this study could not mention about it. The major findings of this study are given below.

- ❖ Due to the lack of proper implication of government rules, policy and program, people are not conscious well and aware about the stock market.
- ❖ Stock market development indicators and economic indicators have a close relationship, the growth rate of equity, market capitalization and turnover are higher than GDP.
- ❖ Due to under developed stock market, there exists few number of stock listed in stock market, size of stock market is very low (<1), low liquidity and low development indicators are found in stock market.

The study conducted by Mohan Khatiwoda about "Securities Investment in Nepal" in 1995 is related with stock market performance. He tried to present new issues market and stock market performance in theoretical base such as legal aspects of secondary market, primary market and also money market. He tries to show a real picture how the security market has been functioning by analyzing the same stock market indicators. To achieve the basic aim of the study he sets the following objectives at the time of research:

- To assess the new issue market performance.
- To present the comparative analysis of money market, in the face of new issue market.
- To analyze the stock market performance.
- To measure the stock market in terms of size liquidity and concentration.
- To suggest the remedial measures for the importance of security markets.

To achieve above objectives, this study includes the period of three years from 1993 to 1995 for primary markets. According to the objectives, the study period is too short. It is not possible to give a true picture about securities markets. At the time of research he used only simple average, percentage has been practiced for logistic presentation of the market performance. In research design, he explains, "As a title of this study cannot be the descriptive analysis of stock market. It deals with the

secondary markets on the basis of available information. In order to justify the data gathering as to fixed deposit, interest rate and dividend payoff, graphic methods have also been embraced."(Khatiwada, 1995:15) But it failed to describe from the behavior side and based on explanatory and descriptive analysis of the recent information and data. Only shown in graphical presentation of data and concerned with legal controversy, the objective of the research has not been completed, there is essential of diagnostic analysis of market mechanism because it helps to give true picture about studies, specificity about the objective is another problem. The broad objectives are not able to properly analyze. The major things of this study are given below:

- Nepalese stock market has no liquid and small size of market than other countries.
- Institutional base, dominating role of money market and rigid rules and regulations are main problems seen in the stock market.
- Securities return is less than market return.
- Dominant roles of banking and financial institution in stock market and also management groups and majority shareholders group in company.

The study conducted by Jeet Bahadur Sapkota is about "Risk and Return in Commercial Bank in Nepal" in 2000. The basic aim of this study is to analyze risk and return of securities of listed companies in Nepal stock exchange limited. "The main target of this study is potential investor who wants to invest in security but repel by imaginary and an unreal risk. So, the study will be more significant for exploring and increasing stock investment."(Sapkota, 2000:7) The basic objective of this study is to describe risk, return, volatility of stock and some relevant and irrelevant factors, which are very important to make decision in stock investment. It also observes the unseen problems facing by individual investors.

Risk and return analysis is an important concept of investment decision process. It helps to make a good investment opportunity in stock market as well as new issue market. Basically, this study analyzes risk and return of commercial banks, which are listed and traded in NEPSE. The study period is 2049/50 to 2055/56 and data are collected from secondary

sources, banks official, SEBON, NEPSE, Brokers, etc. It is based on hypothetical data and are more analytical and empirical types of research rather than descriptive.

Although this study helps to analyze risk and return concept with considering risk, however, it ignores financial risk and return of related companies. Without considering financial risk and return only, market return could not be able to make optimal investment decision. This study also does not appropriately observe the unseen problems facing by individual investors. Regarding with various problems in stock investment in security market, the study is able to conclude following findings:

- It enables the investors to put the return as they can expect and the risk they make take into better prospective.
- Nepalese economy is in emerging stage but due to lack of appropriate information and other knowledge. Nepalese private investors cannot analyze the securities as well as market properly.
- Banking industry is the biggest one in terms of market capitalization and turnover and return for common stock of commercial banking sectors are more parallel with market return.
- This study has also found risky and higher return projects by analyzing coefficient of variance, beta (less volatile and higher volatile market). The portfolio approach of investment is better way to win the stock market investment.

Chapter III
RESEARCH METHODOLOGY

In this chapter an attempt is made to present a basic frame of methodology with in which the research will be conducted. This chapter simply deals with short introduction to financial parameters used in this study & short description of techniques that are used in the time of research and also about Research design, Sources and Nature of Data, Sampling Methods used, and financial and statistical tools used for data analysis.

3.1. Research Design

A research desigh is a plan of the proposed reasearch work. A research desigh represents a compromized dictated by mainly practical consideration. This research attemts to analyze the impact of historical information on the stock price behabiour of commercial banks.

For the analysis of stock price behavior of commercial banks descriptive research design and diagnostic analysis is going to be used. For the analysis purpose the study covers the time period of five years. The key objective of this study is to assess the performance of the listed banks and their stock price behavior. The research design includes specification of the method of the purposed study and detailed plan for carrying out the study with various empirical data for the analysis of the problem. A descriptive research design has been used to make the analysis more conclusive. The diagnostic analysis mainly highlights to find out the actual position of the companies using different statistical and financial tools. This study covers the census data from fiscal year 2004/05 to 2008/09.

3.2 Populations and Sample

There are various segments stocks listed in the stock market such as commercial banks, insurance, finance, hotels, trading, manufacturing and processing and others. This study includes only the commercial banks stocks listed in stock market because of the huge influence of these stocks

in stock market. Among the listed banks nine banks are taken as sample to represent the performance of the capital market.

The sample banks are as follows:

1. Everest Bank Limited

Everest Bank Limited (EBL) started its operations in 1994 with 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. 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 U K. EBL is first bank that has launched e-ticketing system in Nepal. EBL customer can buy yeti airlines ticket through internet. EBL was one of the first bank 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. EBL has introduced branchless banking system first time in Nepal to cover unbanked sector of Nepalese society.

2. Bank of Kathmandu (BOK)

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally. Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sectorBank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

3. Himalayan Bank Limited

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.

4. Nepal Investment Bank Limited

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

5. Nepal SBI Bank Limited

Nepal SBI Bank Ltd. (NSBL) is the first Indo-Nepal joint venture in the financial sector sponsored by three institutional promoters, namely State Bank of India, Employees Provident Fund and Agricultural Development Bank of Nepal through a Memorandum of Understanding signed on 17th July 1992. Fifty five percent of the total share capital of the Bank is held by the State Bank of India, fifteen percent is held by the Employees Provident Fund and thirty percent is held by the general public.

6. Nabil Bank Limited

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 19 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.

7. Kumari Bank Limited

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1,186,099,200.00 of which 70% is contributed from promoters and remaining from public. Kumari Bank Ltd has been providing wide - range of modern banking services through 22 points of representation located in various urban and semi urban part of the country, 13 outside and 9 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like e banking and sms banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value.

8. Standard Chartered Bank Nepal Limited.

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

9. Machhapuchchhre Bank Ltd.

Machhapuchchhre Bank Ltd. (MBL) is 14th commercial bank in Nepal. It has 11 branches at various cities at Nepal. It has introduced 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.

3.3 Nature and Sources of Data

The necessary information and data are collected from different sources. This study is primarily based on the secondary data. Most of the data related to economic growth and stock market development will be collected from annual report and official reports of concerned organization. The required information will be supplemented by Ministry of Finance, Department of Industries, Commerce and Supplies, economic survey published by Nepal Government, quarterly economic bulletin published by Nepal Rastra Bank (NRB), National Planning Commission and Security Board of Nepal (SEBON) as well as internet web site (www.nepalstock.com). Primary data have also been used where secondary sources are inadequate.

3.4 Date Analysis Technique

Analysis is the systematic and careful examination of available facts so that certain conclusions can be drawn from it. The major part of the study is based on the analyze stock price behavior.Mere presentation of data is not enough to analyze stock price behavior unless it is further processed. Many mathematical and statistical tools have been developed to process relevant data to reach a conclusion. In this study, both statistical and financial tools have been used to analyze and interpret the relevant data so that meaningful conclusions can be drawn.

3.4.1 Financial Parameter

The financial parameter helps to measure the financial position of the organization. The parameters are established from financial statement and financial disclosure of concerned company. Some of the financial variables, stated below, have been employed to analyze market capitalization, market price of share, earning price per share and dividend per share etc…

1. **Earning Price Per Share**

The portion of a company's profit allocated to each outstanding share of common stock. Earning per share serves as an indicator of a company's profitability. Earnings per share is generally considered to be the single most important variable in determining a share's price The profitability of a firm from the point of view of the ordinary shareholders is the EPS. It measures the profit available to the equity holders on a per share basis, i.e. the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by the number of outstanding shares. The profits available to the ordinary shareholders are represented by net profits after taxes and preference dividends. EPS is closely watched by the investing public and is considered an important indicator of corporate success.

Thus EPS is calculated as,

$$= \frac{\text{Net Income - Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

An important aspect of EPS that's often ignored is the capital that is required to generate the earnings (net income) in the calculation. Two companies could generate the same EPS number, but one could do so with less equity (investment) - that company would be more efficient at using its capital to generate income and, all other things being equal, would be a "better" company. Investors also need to be aware of earnings manipulation that will affect the quality of the earnings number. It is important not to rely on any one financial measure, but to use it in conjunction with statement analysis and other measures.

2. **Dividend Per Share**

Dividends are a form of profit distribution to the shareholder. Having a growing dividend per share can be a sign that the company's management believes that the growth can be sustained. Dividend is the portion of profit that is ready to be available for shareholders. A part of the net profits belonging to equity shareholders is retained in the business and the balance is paid them as dividends. The dividend paid to the shareholders on a per share basis is the DPS. In other words, DPS is the net

distributed profit belonging to the shareholders divided by the number of ordinary shares outstanding. That is,

$$DPS \text{ X } \frac{Dividend\ Available\ to\ ordinary\ Shareholders}{No.of\ Shares\ Outstading}$$

Dividends are a form of profit distribution to the shareholder. Having a growing dividend per share can be a sign that the company's management believes that the growth can be sustained.

3. Return on Total Assets

An indicator of how profitable a company is relative to its total assets. At this moment, the profitability ratio is measured in terms of the relationship between the net profits and assets. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. The ROA may also be called profit-to-assets ratio. It measures the overall effectiveness of management in generating profits with its available assets. The higher the firms return on total assets, the better. The return on total assets is calculated as follows:

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

ROA gives an idea as to how efficient management is at using its assets to generate earnings. Sometimes this is referred to as "return on investment". ROA tells you what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or the ROA of a similar company.

The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment. For example, if one company has a net income

of Rs.1 million and total assets of Rs.5 million, its ROA is 20%; however, if another company earns the same amount but has total assets of Rs.10 million, it has an ROA of 10%. Based on this example, the first company is better at converting its investment into profit. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment

4. Return on Common Equity

The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher this return, the better off are the owners. Return on common equity is calculated as follows:

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

The ROE is useful for comparing the profitability of a company to that of other firms in the same industry.

5. Price Earning Multiple

A valuation ratio of a company's current share price compared to its per-share earnings. Price earning multiple is the relationship between earning per share and market price of the stock. Earning per share shows the companies performance in the sense that how well the company has managed its material as well as human resources to satisfy the interest of stockholders. So, P/E multiple reflects the price currently being paid by the market for each rupee of currently reported EPS.

$$P/E \text{ ratio} = \frac{\text{Market Price per Share}}{\text{Earning per Share}}$$

In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. However, the P/E ratio doesn't tell us the whole story by itself. It's usually more useful to compare the P/E ratios of one company to other companies in the same industry, to the market in general or against the company's own historical P/E. It would not be useful for investors using the P/E ratio as a basis for their investment to compare the P/E of a technology company (high P/E) to a utility company (low P/E) as each industry has much different growth prospects.

6. Dividend Yield

Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position - in other words, how much "bang for your buck" you are getting from dividends. Dividend yield shows the relationship between dividend per share and market price per share. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. The dividend yield is calculated by dividing the cash dividend per share by the market value per share.

Thus Dividend Yield is calculated as,

$$= \frac{\text{Annual Dividends Per Share}}{\text{Price Per Share}}$$

Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. To better explain the concept, refer to this dividend yield example: If two companies both pay annual dividends of Rs.1 per share, but ABC company's stock is trading at Rs.20 while XYZ company's stock is trading at Rs.40, then ABC has a dividend yield of 5% while XYZ is only yielding 2.5%. Thus, assuming all other factors are equivalent, an investor looking to supplement his or her income would likely prefer ABC's stock over that of XYZ.

7. Earning Yield

The earnings per share for the most recent 12-month period divided by the current market price per share. The earnings yield (which is the inverse of the P/E ratio) shows the percentage of each dollar invested in the stock that was earned by the company The earning yield may be defined as the ratio of earning per share to the market value per ordinary share. Earning yield is also called earning price ratio.

$$EY \text{ X } \frac{Earnings\ per\ Share}{Market\ Value\ perShare}$$

The earnings yield is used by many investment managers to determine optimal asset allocations. Money managers often compare the earnings yield of a broad market index (such as the S&P 500) to prevailing interest rates, such as the current 10-year Treasury yield. If the earnings yield is less than the rate of the 10-year Treasury yield, stocks as a whole may be considered overvalued. If the earnings yield is higher, stocks may consider undervalued relative to bonds. Classical theory suggests that investors in equities should demand an extra risk premium of several percentage points above prevailing risk-free rates (such as T-bills) in their earnings yield to compensate them for the higher risk of owning stocks over bonds and other asset classes.

8. Market value to Book value Ratio

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

$$MV / BV \ \ Ratio \text{ X } \frac{Market\ \ Value\ \ per\ Share}{Book\ \ Value\ perShare}$$

9. Liquidity Ratio

A class of financial metrics that is used to determine a company's ability to pay off its short-terms debts obligations. Generally, the higher the value of the ratio, the larger the margin of safety that the company possesses to cover short-term debts. Liquidity is the pre-requisite for the very survival of the firm. The liquidity ratio measures the ability of a firm

to meet short-term obligations and reflect the short-term financial strength of the firm. Thus current ratio has been used to measure liquidity.

$$Current\ Ratio\ \mathrm{X}\ \frac{Current\ Assets}{Current\ Liabilites}$$

A company's ability to turn short-term assets into cash to cover debts is of the utmost importance when creditors are seeking payment. Bankruptcy analysts and mortgage originators frequently use the liquidity ratios to determine whether a company will be able to continue as a going concern.

3.4.2 Statistical tool

The arithmetic mean, standard deviation, coefficient of correlation is the main tools applied in this study. Other statistical tools are also applied where necessary.

1. **Mean**

For a data set, the mean is the sum of the observations divided by the number of observations. Mean or arithmetic average of a series is the figure obtained by dividing the total values of the various items by their number. The mean of a set of numbers x_1, x_2, ..., x_n is typically denoted by , pronounced "x bar"($\overline{X}$) is given by:

$$\overline{X}\ \mathrm{X}\frac{X}{N}$$

Where,

X = Sum of observations

N = Number of observations

For a data set, the mean is the sum of the observations divided by the number of observations. The mean is often quoted along with the standard deviation: the mean describes the central location of the data, and the standard deviation describes the spread.

2. **Correlation Coefficient**

It is statistical relationships between two or more random variables or observed data values. Correlation analysis is necessary in order to find out whether the selected variables in time series have any relation or not. Correlation analysis establishes the closeness of relationship between the two and more variables. It measures the degree of relationship or association between variables. Karl Pearson's Coefficient of correlation is used to measure the degree of association among the variables. The formula used to calculate the coefficient of correlation is as:

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

Correlations are useful because they can indicate a predictive relationship that can be exploited in practice. For example, an electrical utility may produce less power on a mild day based on the correlation between electricity demand and weather. Correlations can also suggest possible causal, or mechanistic relationships; however statistical dependence is not sufficient to demonstrate the presence of such a relationship.

The value of correlation coefficient ranges between –1 and +1. Following rules are available in interpreting the value of correlation coefficient:

- When r = 0, the variables are uncorrelated.
- When r falls between 0 to +1, two variables are increasing or decreasing to the same direction.
- When r ranges between 0 to –1, two variables are increasing or decreasing in the opposite direction.
- When r = +1, it indicates there is perfect positive relationship between the variables.
- When r = -1, it means there is perfect negative correlation between the two variables.

Chapter IV
PRESENTATION AND ANALYSIS OF DATA

This chapter is the heart of the study. This chapter will be of great for this study as all the finds conclusions and recommendations are going to be delivered from the calculation done in this chapter. The presentation and analysis of data is the foundation of this study, which consists three chapters i.e., the state and growth of stock market, comparative analysis of financial performance of the companies and analysis of market price of stock with respect to dividend and earning.

4.1 State and growth of stock market

A stock market is a public market (a loose network of economic transactions not a physical facility or discrete entity) for the trading of company stock and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately. The stocks are listed and traded on stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organizations to a listing of stocks and securities together.

The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. The first issue of government bonds was in 1964 and the establishment of the Securities Marketing Center in 1976, under the Company Act. It assisted public limited companies to raise capital through issue of shares and debentures and also provide a market place for trading the securities. Although the purpose of the establishment was to assist the public limited companies, but it was only concerned with dealing the government bonds and the treasury bills in the beginning phase of establishment. After the Securities Exchange Act in 1983, the Security Marketing Center was changed to Security Exchange Center and it opened the floor for security trading of shares to provide liquidity and marketability of new issued securities. His Majesty's Government under a program initiated to reform capital market

and in the process Securities Exchange Center was converted into Nepal Stock Exchange in 1993. After opening the floor for secondary trading of shares in 1984, 16 companies were listed with paid-up capital and market capital of Rs. 307.32 million and 318.67 million respectively in fiscal year 1985/86. Security Exchange Center was new concept at that time, to work the new environment, the existing laws and regulations from the government side and also the awareness of the people to security exchange activities were essential. However, Nepalese economy is weak than industrial developed country, gross domestic saving (GDS) and gross domestic product (GDP) is very low. People have tendency to invest in unproductive sector, rather than productive activities, regarding it the pace of development of stock market activities was very slow in corresponding years. The following table shows the fiscal year wise development of stock market.

The adhoc policy and negligible participation from government side and also low public response were main cause to slow development of stock market. It also failed to channelize the response to the productive sectors. On the other hand, due to lack of large projects people have not been able to get opportunity to invest their savings, so the surplus and savings were diverted to invest in unproductive sectors and real estate due to lack of mobilization of savings. As a result, people were discouraged to utilize savings in productive sectors and there was no return for savers. The existence of all these conditions was caused due to slow growth of economic activities before establishment of Nepal Stock Exchange Limited.

After the restoration of democracy government followed liberalization policy and also opened the domestic market for foreign investors. It was positive sign to the development of stock market. Nepal Stock Exchange opened its trading floor from 13th January 1994 for its newly appointed brokers and market makers. The extended structural adjustment programs in fiscal year 1993/94 had significantly positive impact on stock market development. Higher liquidity and market price of

stock were observed in stock market, which increasingly drew the attention of public in the ownership structure of the corporate sector.

In the beginning of the 2007/08 fiscal year, NEPSE replaced the old open-out-cry system of securities trading, which was in place since the beginning of secondary trading in 1994, with the automated trading system (ATS). The ATS has not only mechanized securities trading, but also reduced the manipulation of prices and human errors. NEPSE has also reformed its organizational structure, right-sized its human resources, outsourced its cleaning and security services started online trading through WAN disseminated real-time information and extended the trading hours to make stock exchanges efficient. The Securities Exchange Act-2063 and new regulations formulated under the act have further ensured the efficiency of trading. NEPSE is bringing this newsletter out to reduce uncertainty in the market and to make the market more efficient by providing information about secondary market activities and by carrying market reviews.

The Government of Nepal has issued three new Regulations, namely, Securities Businessperson (Stock Broker, Dealer and Market Maker) Regulation-2007, Securities Board Regulation-2007 and Stock Exchange Licensing Regulation-2007. These Regulations which came into effect from 4 November 2007, among other things, paved the way for opening a new stock exchange, increase the number of stock brokers and reduce the brokerage commission.

NEPSE extended the trading hours by one hour from 19 December 2007 due to an increasing trading pressure. The increase in trading hours will benefit small and big investors alike. NEPSE has also started providing real time information such as top gainers and losers, imposition of a trading halt resumption of trading and even place orders without being present in the trading hour. The Security Board of Nepal has registered capital mobilization of Rs. 4.05 billion by 20 different companies in the first six months of the cur rent fiscal year. Eight of these companies have issued

ordinary shares worth Rs. 1.77 billion and the remaining 12 companies have issued rights share worth Rs.2.28 billion.

4.1.1 Present status of stock market in Nepal

Equity market has shown impressive recovery from the sharp fall in 1994 with the lag effect elongated till late 1998. At present, it has been performing more strongly than in earlier years. The improvement in the equity market has been attributed to factors including good prospect of corporate earnings and broader household participation in the stock market. Investors not only reply on the statement of the brokers, but also they have a concern over the financial information of the concerned company therefore the shares of companies with better prospect of dividend, capital increment and growth have normally higher prices in the stock market.. At present the stock market in Nepal has witnessed its strength surprisingly and his has raised hopes for sustainer growth of corporate undertakings.

Stock market in Nepal has been growing gradually both in terms of turnover as well as the capital investment from 16 listed companies in 1986 they grew to 110 in 2000 and 115 and declined in the year to 96 and rise to 149 in 2009. During this period their paid up capital surged up from 341 million to 61140 million. The number of listed companies increased has increased tremendously. Market capitalization of listed shares has been rising continually except with few cases of vitality. It has reached to Rs 512939.07 million in 2009 from 548 million in 1986. The details of development of stock market in Nepal is shown in the below table.

Table 4.1: The development of stock market in Nepal

(in million)

Description	2005/06	2006/07	2007/08	2008/09
Paid-up value of listed shares (Rs.)	19958.00	21746.00	29465.00	61140.00
Market Capitalization (Rs.)	96763.74	186301.28	366247.56	512939.07
Turnover (Rs.)	3451.43	8360.07	22820.76	21681.07
Market Days	228	232	235	234
Number of company Listed	125	135	142	149
Number of company Traded	110	116	136	170
Number of Shares Traded	12221930	18147250	28599770	30547160
% of turnover to mkt. capitalization	7.35	4.49	6.23	4.23
% of turnover to paid-up value	26.88	38.44	77.45	35.46
% Of Turnover Of Commercial Banks To Total Turnover	78.12	70.04	60.57	57.22

Source: www. nepalstock.com

The above table clearly shows the main indicators of stock market have decreased recently. The paid-up value of listed shares was Rs 19958.00 million in the year 2005/06, which is in the increasing trend and was 61140 million in 2008/09. It is mainly due to the issuance of bonus shares, rights shares and it is mainly due to the issuance of bonus shares, rights shares and some initial public offerings. In the year 2008/09, the turnover has decreased sharply and registered to Rs.21681.07 million however the market capitalization is increased than the previous year and is Rs. 512939.07 million. The number of listed company has also increased but the rate of growth is very slow. The number of share traded in the floor has increased slowly in current yeas with compared to previous year growth rate from 28599770 to 30547160 over the period of 2007/08 to 2008/09. There is sharp decline in % of turnover to mkt. capitalization & % of turnover to paid-up value. The percentage of turnover commercial banks on percentage turnover of stock market is in decreasing trend it was 78.12 % in period 2005/06 which has decreased to 57.22% in period 2008/09.

The market sharply decreased over the period of study, the possible reason for decline may be due to world over recession & also due to international and national reasons. The world economy is going through the recession phase that made severe affect on world stock market and Nepalese stock market is not isolated. The increasing level of internal conflict and political instability is badly hampering the stock market and economy as a whole.

4.2 Analysis of financial performance of the companies

The performances of individual companies that are listed in the stock exchange have direct impact on capital market. A company having a good performance has highest market price, high volume of transaction, higher demand of stocks, lower risk and low cost of capital.

Various indicators are used to analyze the company performance. The used indicators are earning price per share, market price per share, dividend price per share, book value per share, price earning multiple, dividend payout ratio, market price to book value ratio, dividend yield, earning yield, liquidity ratio, return on assets and return on equity.

4.2.1 Earning price per share

The profitability of a firm from the point of view of the ordinary shareholders is the EPS. It measures the profit available to the equity holders on a per share basis, i.e. the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by the number of outstanding shares. The profits available to the ordinary shareholders are represented by net profits after taxes and preference dividends. EPS is closely watched by the investing public and is generally considered to be the single most important variable in determining a share's price.

Thus EPS is calculated as,

$$= \frac{\text{Net Income - Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

Table 4.2.1: EPS of the sample banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	54.22	62.78	78.42	91.82	99.99	77.45
BOK	30.10	43.67	43.50	59.94	54.68	46.38
HBL	47.91	59.24	60.66	62.74	61.90	58.49
NIBL.	39.50	59.35	62.57	57.87	37.42	51.34
NSBL.	13.29	18.27	39.35	28.33	36.18	27.08
NBL	105.49	129.21	137.08	108.31	106.76	117.37
KBL	17.58	16.59	22.70	16.35	22.04	19.05
SCBL	143.14	175.84	167.37	131.92	109.99	145.65
MBL	15.43	18.74	9.02	10.35	8.33	12.37

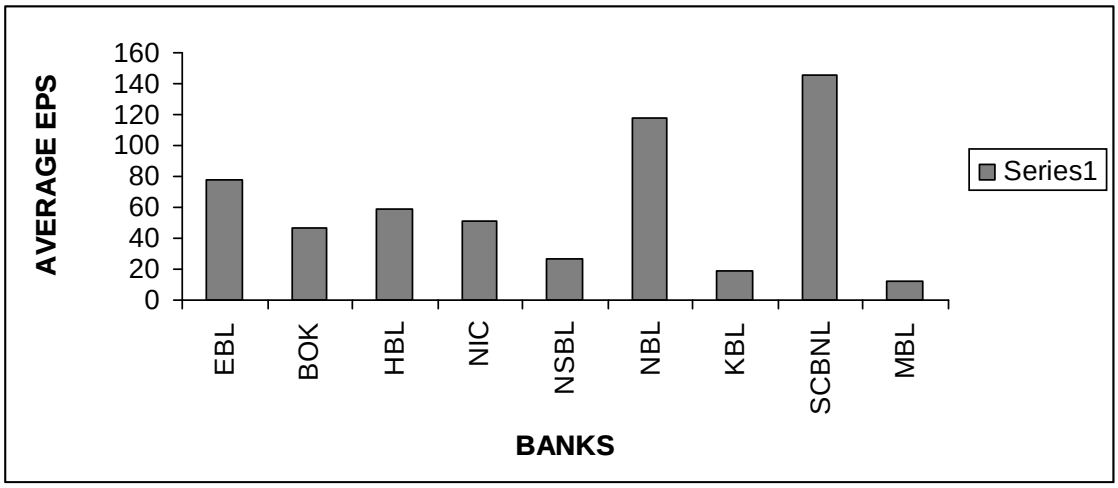
Source: Annual Report of Sample Banks

The average EPS of all sample banks are more than Rs 40 except the KBL, MBL and NSBL. The market leader in this segment is SCBNL with the average EPS of Rs 145.65. The lowest average EPS is Rs 12.37 of MBL. The SCBNL & NBL are the only bank that has EPS more than Rs 100 in the period of 5 years. The SCBNL has the highest EPS, as Rs 175.84 in the year 2005/06 and this was the single EPS more Rs 175 of the entire sample banks. The lowest EPS recorded was Rs 9.02 of MBL in the year 2006/07. The reason of this low EPS was due to the fact that the earning declined sharply in the year.

All the above banks EPS has increased from 2004/05 to 2007/08 but there is slight decease in EPS in most banks in year 2008/09. EPS plays single most important variable in determining the price of share.

The table can also be presented in graph to understand the data more clearly. The following figure presents the average EPS of sample banks during the period of 5 years.

Fig.4.2.1: EPS of Sample Banks



The figure clearly shows that the average EPS of SCBNL is the highest among all selected sample. On the basis of EPS, the stock of SCBNL is the best one to invest. The higher level of EPS will generally increase the market price of stock.

4.2.2 Dividend per share

Dividend is the portion of profit that is ready to be available for shareholders. A part of the net profits belonging to equity shareholders is retained in the business and the balance is paid them as dividends. The dividend paid to the shareholders on a per share basis is the DPS. In other words, DPS is the net distributed profit belonging to the shareholders divided by the number of ordinary shares outstanding.

That is,

$$DPS \text{ X } \frac{Dividend\ Available\ to\ ordinary\ Shareholders}{No.of\ Shares\ Outstading}$$

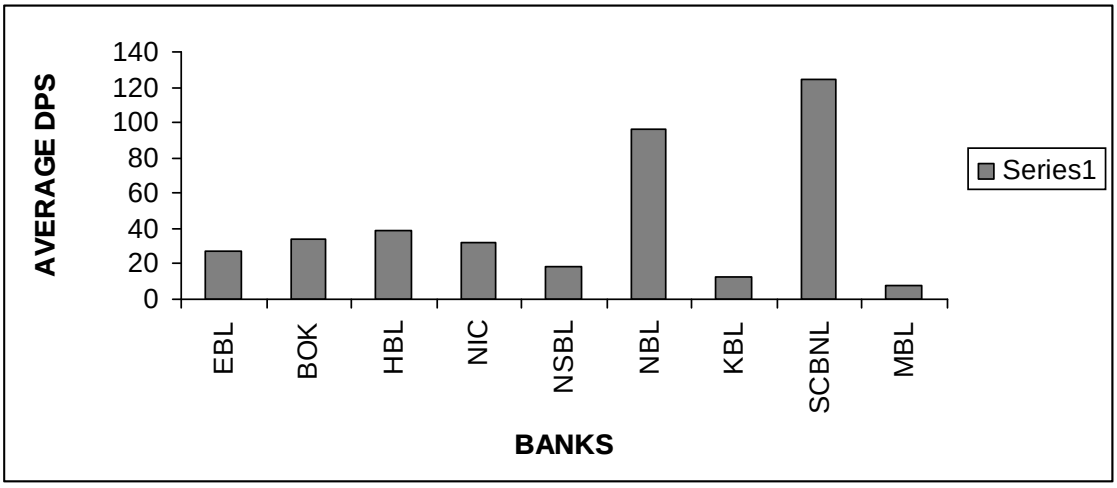
Table 4.2.2: DPS of the sample banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	20.00	25.00	30.00	30.00	30.00	27.00
BOK	15.00	48.00	20.00	42.11	47.37	34.50
HBL	31.58	35.00	40.00	45.00	43.56	39.03
NIBL.	12.50	55.46	30.00	40.83	20.00	31.76
NSBL.	-	5.00	47.59	-	42.11	18.94
NBL	70.00	85.00	140.00	100.00	85.00	96.00
KBL	-	21.05	21.05	10.53	10.58	12.64
SCBL	120.00	140.00	130.00	130.00	100.00	124.00
MBL	-	15.79	-	21.05	-	7.37

Source: Annual Report of Sample Banks

Standard Chartered Bank seems prominent in declaring large amount of dividend. The average dividend of SCBNL is Rs 124 per share. The lowest dividend paying bank is Machhapuchchhre Bank whose average is 7.37. Only two banks NBL and SCBNL seem to be highest & regular on offering dividend to shareholders. Having a growing dividend per share can be a sign that the company's management believes that the growth can be sustained.

Fig.4.2.2: DPS of Sample Banks



The figure clearly states that the SCBNL is the top on dividend per share. The NABIL and Kumari are also good in paying dividends. It is believed that the declaration of dividend has positive impact on the price of share. In Nepalese context, only the banking sector is regular on paying dividend. This may be one of the reasons of such high prices of banking sector in stock market.

4.2.3 Return on Total Assets

Here, the profitability ratio is measured in terms of the relationship between the net profits and assets. The ROA may also be called profit-to-assets ratio. It measures the overall effectiveness of management in generating profits with its available assets. The higher the firms return on total assets, the better. The return on total assets is calculated as follows:

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

Table 4.2.3: ROA of Sample Banks

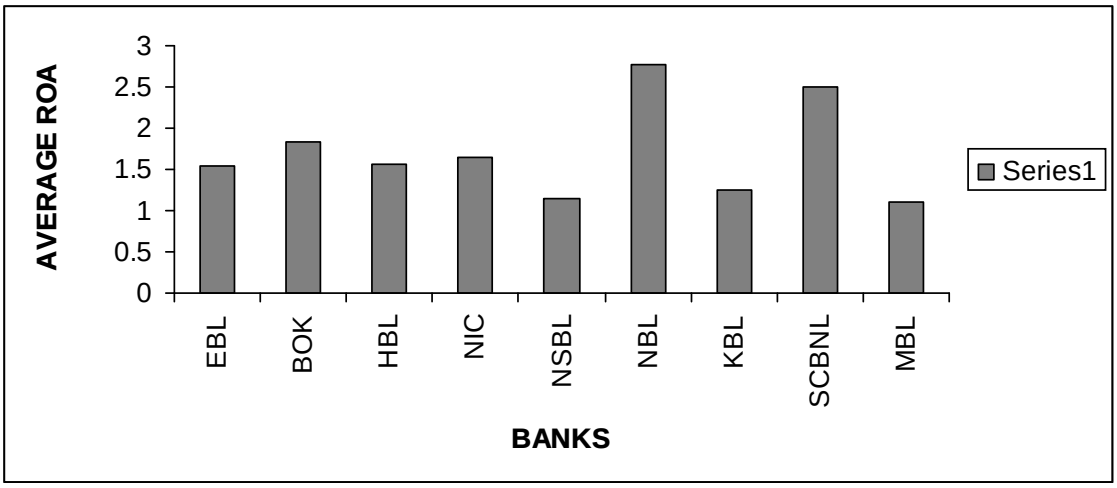
Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	1.40	1.50	1.40	1.70	1.73	1.55
BOK	1.42	1.65	1.80	2.04	2.25	1.83
HBL	1.11	1.55	1.47	1.76	1.91	1.56
NIBL.	1.42	1.61	1.79	1.77	1.68	1.65
NSBL.	0.55	0.90	1.83	1.44	1.02	1.15
NBL	3.06	3.23	2.72	2.32	2.55	2.78
KBL	1.13	1.15	1.43	1.16	1.41	1.26
SCBL	2.46	2.56	2.42	2.46	2.53	2.49
MBL	1.31	1.48	0.69	1.00	1.00	1.10

Source: Annual Report of Sample Banks

The ROA of SCBNL is the highest with 2.78% while the lowest ROA is 1.10% of Machhapuchchhre Bank. All the banks' ROA is more than 1% which is acceptable. Only SCBNL & Nabil has more than 2% of ROA for the period of five years. The NSBL & Machhapuchchhre Bank are the only bank that has poor ROA for the period of five years.

The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income The higher the ROA number, the better, because the company is earning more money on less investment. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment Higher ROA generally push the market price upward.

Fig.4.2.3: ROA of Sample Banks.



The above figure shows the average ROA for all sample banks for the given period of study & only SCBNL & Nabil has more than 2% of ROA form other banks.

4.2.4Return on Common Equity

The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher this

return, the better off are the owners. The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. Return on common equity is calculated as follows:

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

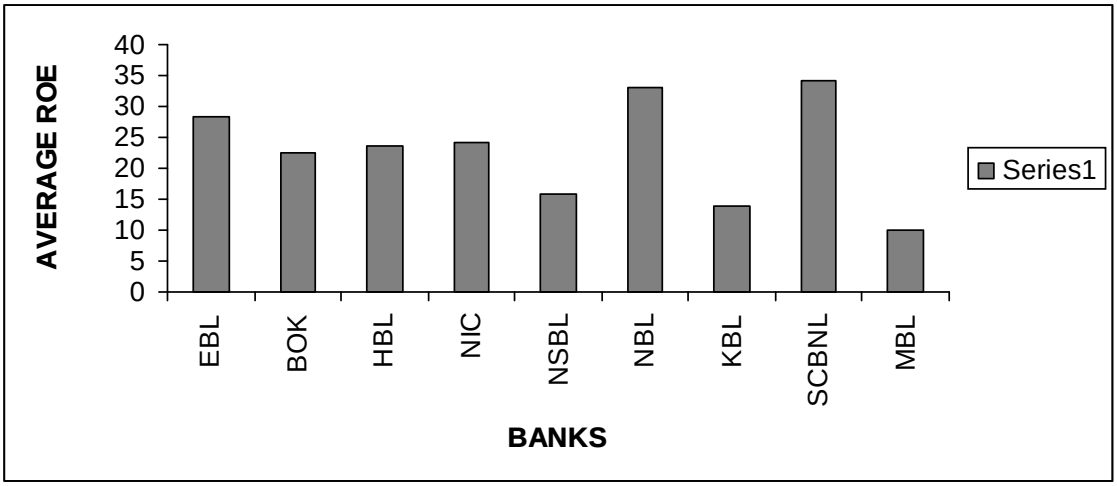
Table 4.2.4: ROE of Sample Banks.

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	24.65	28.84	27.92	28.53	31.88	28.36
BOK	14.09	18.93	26.41	26.94	26.51	22.58
HBL	19.99	25.90	22.91	25.30	24.13	23.65
NIBL.	19.65	24.73	26.74	25.95	23.10	24.03
NSBL.	8.33	12.04	22.10	17.64	18.58	15.74
NBL	31.30	33.92	33.92	32.79	30.59	32.95
KBL	12.46	11.13	16.57	12.77	16.08	13.80
SCBL	33.89	37.55	32.68	32.68	33.58	34.08
MBL	13.30	14.39	7.41	7.30	7.25	9.93

Source: Annual Report of Sample Banks

The ROE of SCBNL is the highest among all selected banks. SCBNL's average ROE is 34.08%. The lowest ROE is 9.93% of Machhapuchchhre Bank. Investors seek higher ROE for investment. In this regard, the SCBNL's stock is excellent while the stock of NABIL and Everest are also good. The following figure presents the average ROE for 5 years of study.

Fig.4.2.4: ROE of Sample Banks



The above figure shows the average ROE for all sample banks for the given period of study & only SCBNL & Nabil has more than 30% of ROE form other banks.

4.2.5 Market Price per Share

The market price of share is very important for all stakeholders. Generally, good market price per share is the fate of a company. If the market price is well high, the investors perceive it very positively disregarding the other factors. Any decrease in the market price will adversely affect the company. If the market price of a particular company decreases very sharply and consistently, it may lead to bankruptcy. The market price of share is the most important factor from the view of investor, who firstly looks for the higher market price rather than other indicators.

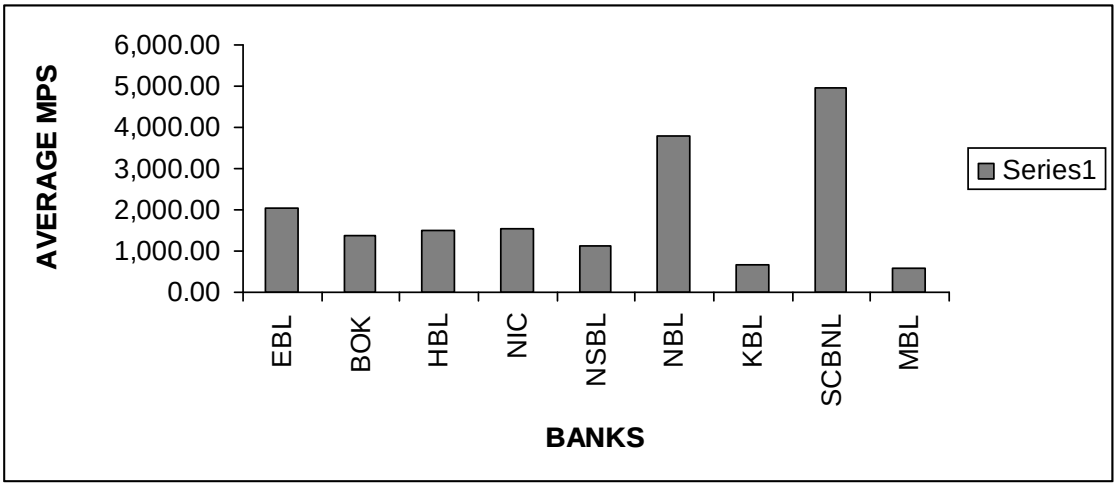
Table 4.2.5: MPS of the selected banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	870.00	1,379.00	2,430.00	3,132.00	2,455.00	2,053.20
BOK	430.00	850.00	1,375.00	2,350.00	1,825.00	1,366.00
HBL	920.00	1,100.00	1,740.00	1,980.00	1,760.00	1,500.00
NIBL.	800.00	1,260.00	1,729.00	2,450.00	1,388.00	1,525.40
NSBL.	335.00	612.00	1,176.00	1,511.00	1,900.00	1,106.80
NBL	1,505.00	2,240.00	5,050.00	5,275.00	4,899.00	3,793.80
KBL	369.00	443.00	830.00	1,005.00	700.00	669.40
SCBL	2,345.00	3,775.00	5,900.00	6,830.00	6,010.00	4,972.00
MBL	256.00	320.00	620.00	1,285.00	420.00	580.20

Source: Annual Report of Sample Banks

Market price per share shows the value of each share at a glance. From the above table, the average MPS of SCBNL has the highest value in comparison of other banks. It has the average value of Rs.4972.00. That means SCBNL is showing good performance over this period than the others banks. The lowest of all banks is the Machhapuchchhre, which average MPS is Rs. 580.20. All the banks MPS has decreased in the year 2008/09 except the MPS of NSBL has increased despite the global recession.

Fig.4.2.5: Market Price of Sample banks



The above figure clearly shows that market price of SCBNL has the highest value whereas Machhapuchchhre has the lowest market price.

4.2.6 Price Earning Ratio

Price earning multiple is the relationship between earning per share and market price of the stock. Earning per share shows the companies performance in the sense that how well the company has managed its material as well as human resources to satisfy the interest of stockholders. The P/E is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollar of earnings. In other words, the P/E ratio measures investors' expectations and the market appraisal of the performance of the firm. As a general rule, the higher the P/E ratio, the better it is for the owners. Security analyst to assess a firm's performance as expected by the investors popularly uses this ratio. It is the most important and useful tool to compare one company to other company in same industry.

$$P/E\ ratio\ \mathrm{X}\frac{Market\ \mathrm{Pr}ice\ per\ Share}{Earning\ per\ Share}$$

Table 4.2.6: Price earning ratio of sample banks

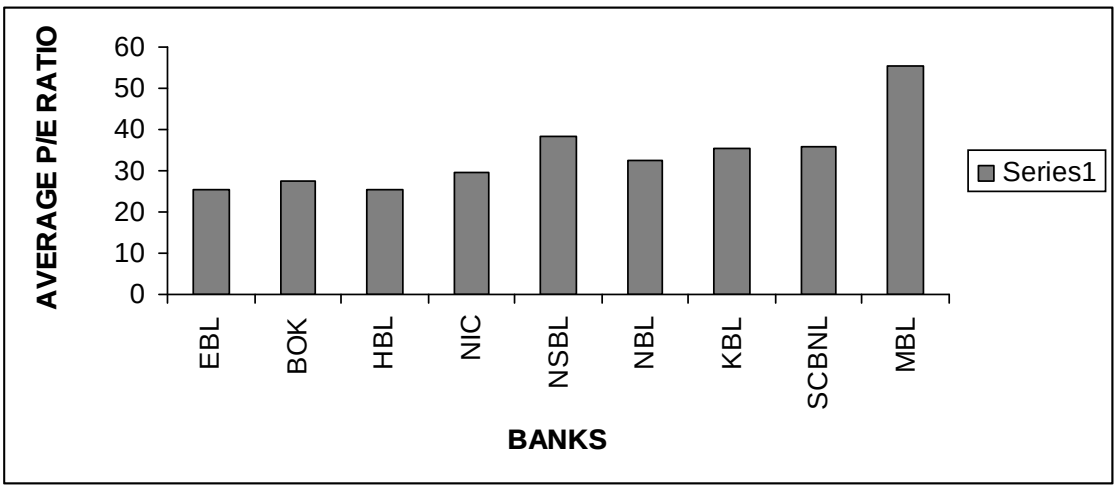
Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	16.04	21.97	30.99	34.11	24.25	25.47
BOK	14.29	19.46	31.61	39.21	33.37	27.59
HBL	19.20	18.57	28.69	31.56	28.43	25.29
NIBL.	20.25	21.23	27.63	42.33	36.10	29.51
NSBL.	25.11	33.49	26.89	53.34	52.52	38.27
NBL	14.27	17.34	36.84	48.70	45.89	32.61
KBL	20.99	26.61	35.56	61.47	31.76	35.28
SCBL	16.38	21.47	35.25	51.77	54.64	35.90
MBL	16.59	17.08	68.74	124.19	50.14	55.35

Source: Annual Report of Sample Banks

The P/E ratio is an important indicator of the performance of stock in stock market. In this criterion, the Machhapuchchhre Bank has the highest average P/E ratio among all samples. It has 55.35 average P/E ratio during the period of study. In the year 2007/08, the P/E of Machhapuchchhre Bank was 124.19 times which is more than twice of other banks. This is due to the sharp increase in market price per share and at the same time small increase in the EPS. SCBNL is the most consistent in P/E ratio, as. All the banks P/E ratio declined in 2008/09 where as SCBNL's P/E ratio has increased constantly. The less volatility in P/E ratio during the study period is the sign of good consistency performance. The consistency is P/E ratio is important than having higher P/E ratio with high degree of volatility. The consistency in P/E ratio will have positive impact on the price of share in market. A rational investor will look for the consistency than high but fluctuating P/E ratio.

The figure below presents the average P/E ratio of selected sample between the period 2004/05 and 2008/09.

Fig.4.2.6: P/E ratio of Sample Banks



The above figure shows the average P/E ratio of Machhapuchchhre Bank s highest form all sample banks for the given period of study.

4.2.7 Dividend Payout Ratio

It is also known as payout ratio. It measures the relationship between the earnings belonging to the ordinary shareholders and the dividend paid to them. In other words, the D/P ratio shows what percentage share of the net profits after tax and preference dividend is paid out as dividend to the equity holders. It can be calculated by dividing the total dividend paid to the owners by the total profits/ earnings available to them. Alternatively, it can be found out by dividing the DPS by the EPS. Investors prefer for a firm that have higher D/P ratio. Thus,

$$D/P\ ratio\ \mathrm{X}\frac{DPS}{EPS}$$

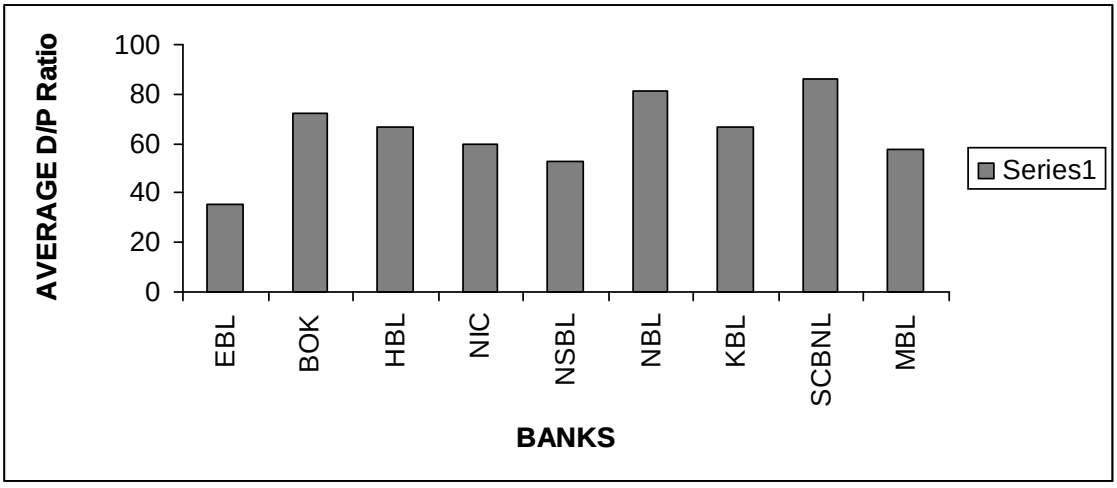
Table 4.2.7: Dividend Payout Ratio of sample banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	36.89	39.82	38.26	32.67	30.00	35.53
BOK	49.83	109.92	45.98	70.25	86.63	72.52
HBL	65.92	59.08	65.94	71.72	70.37	66.61
NIBL.	31.65	93.45	47.95	70.55	53.45	59.41
NSBL.	-	27.37	120.94	-	116.39	52.94
NBL	66.36	65.78	102.13	92.33	79.62	81.24
KBL	-	126.88	92.73	64.40	48.00	66.40
SCBL	83.83	79.62	77.67	98.54	90.92	86.12
MBL	-	84.26	-	203.38	-	57.53

Source: Annual Report of Sample Banks

On average, the SCBNL Bank has the highest rate of payout among all selected samples. The table shows the highest average payout ratio of SCBNL Bank is 86.12% while the second highest payout ratio is 81.24% of Nabil Bank. The highest payout ratio among all samples during the period of study was 203.38% of Machhapuchchhre Bank in the year 2007/08. Such a high payout ratio is due to huge dividend paid in hat year. The SCBNL is consistent in paying dividend. The consistency in payout is considered very positively among all stakeholders. The NABIL bank is also consistent in dividend payout ratio while the NSBL is not so consistent as NABIL and SCBNL. Generally, the high and consistent payout ratio has positive impact on the behavior of market price of stock. A good payout ratio helps the stock price to move upward. The following table shows the average payout ratio of selected sample between the period 2004/05 and 2008/09.

Fig.4.2.7: DPR of Sample Banks



The above table clearly shows that SCBNL has the highest and EBL has the lowest average DPR.

4.2.8 Dividend Yield

Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position - in other words, how much "bang for your buck" you are getting from dividends Dividend yield shows the relationship between dividend per share and market price per share. It shows how much a company pays out in dividends each year relative to its share price. The dividend yield is calculated by dividing the cash dividend per share by the market value per share.

Thus Dividend Yield is calculated as,

$$= \frac{\text{Annual Dividends Per Share}}{\text{Price Per Share}}$$

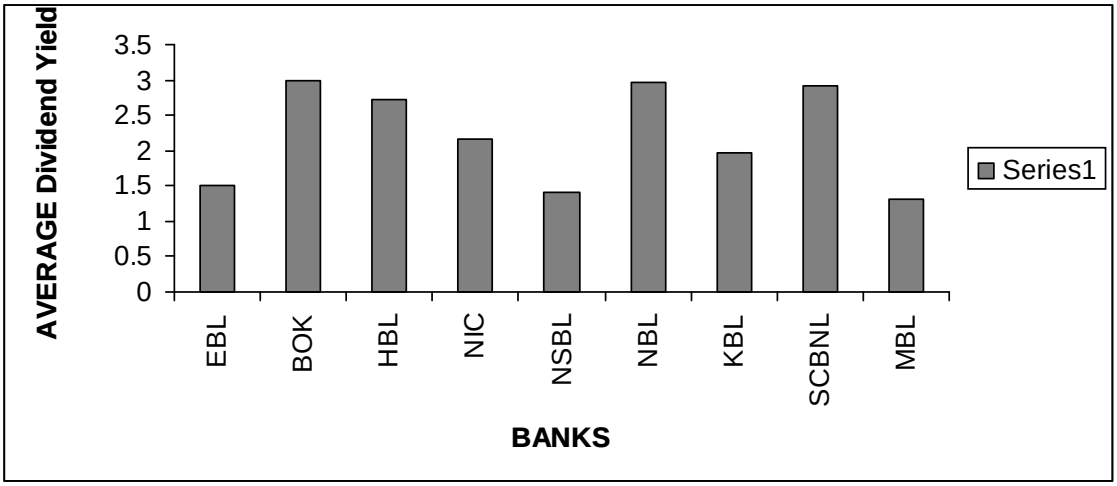
Table 4.2.8: Dividend Yield of sample banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	2.30	1.81	1.23	0.96	1.22	1.51
BOK	3.49	5.65	1.45	1.79	2.60	3.00
HBL	3.43	3.18	2.30	2.27	2.48	2.73
NIBL.	1.56	4.40	1.74	1.67	1.44	2.16
NSBL.	-	0.82	4.05	-	2.22	1.42
NBL	4.65	3.79	2.77	1.90	1.74	2.97
KBL	-	4.75	2.54	1.05	1.51	1.97
SCBL	5.12	3.71	2.20	1.90	1.66	2.92
MBL	-	4.93	-	1.64	-	1.31

Source: Annual Report of Sample Banks

The dividend yield is another major factor that affect the behavior of stock price in market. A high and consistent yield generally increases the market price of stock. In this parameter, the BOK is again the best among the selected banks. Its share is earning a good average return. The yielding rate of SCBNL & Nabil Bank is regular but is in a decreasing trend. Such a decreasing trend in yielding rate of stock always has the negative impact on the movement of stock price. The yielding rate of Machhapuchchhre Bank, Everest Bank, & NSBL is irregular and very low comparatively to other banks. Its share are yielding less than 1.50% on average and these banks have lowest DY among all banks. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. The average dividend yield can also be presented in graph as well. The following figure shows the average dividend yield rate:

Fig.4.2.8: DY of Sample Banks



The above figure shows that BOK has the highest average DY among all the banks

4.2.9 Earning Yield

The earning yield may be defined as the ratio of earning per share to the market value per ordinary share. Earning yield is also called earning price ratio.

$$EY \quad X \quad \frac{Earnings\ per\ Share}{Market\ Value\ perShare}$$

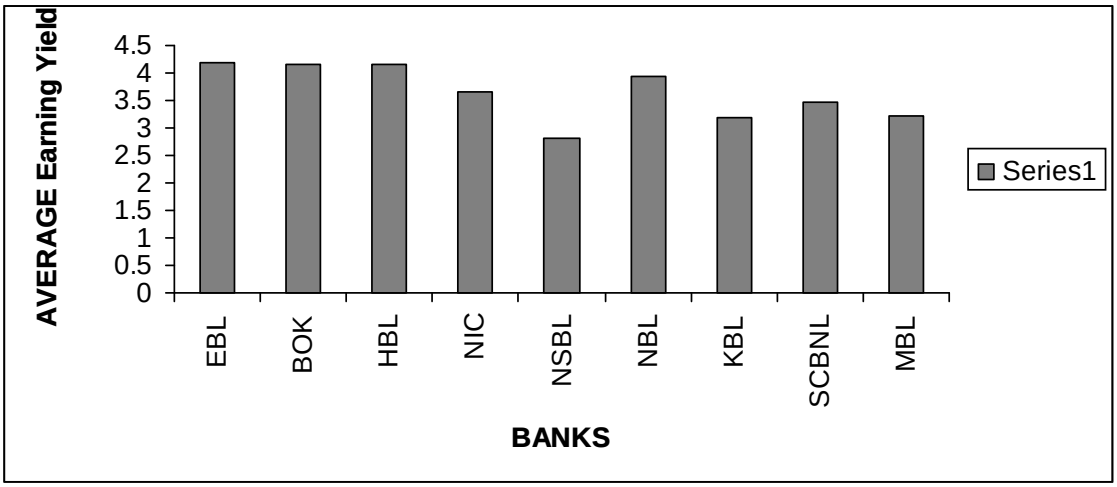
Table 4.2.9: Earning Yield of Sample Banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	6.23	4.55	3.23	2.93	4.07	4.20
BOK	7.00	5.14	3.16	2.55	3.00	4.17
HBL	5.21	5.39	3.49	3.17	3.52	4.15
NIBL.	4.94	4.71	3.62	2.36	2.70	3.66
NSBL.	3.97	2.99	3.35	1.87	1.90	2.82
NBL	7.01	5.77	2.71	2.05	2.18	3.94
KBL	4.76	3.74	2.73	1.63	3.15	3.20
SCBL	6.10	4.66	2.84	1.93	1.83	3.47
MBL	6.03	5.86	1.45	0.81	1.98	3.23

Source: Annual Report of Sample Banks

The earning yield is another phenomenon that has impact on the behavior of stock price. Generally, a high and consistent yield is considered good among all stakeholders. In this parameter, the Everest Bank is best among the selected banks. Its share is earning a good return in each of the year with steady rate. The yielding rate of SCBNL is regular but is in a decreasing trend. Such a decreasing trend in yielding rate of stock always has the negative impact on the movement of stock price. The yielding rate of NSBL is irregular and very low comparatively to other banks. Its share is yielding only 2.82% on average and is the lowest among all banks. Classical theory suggests that investors in equities should demand an extra risk premium of several percentage points above prevailing risk-free rates (such as T-bills) in their earnings yield to compensate them for the higher risk of owning stocks over bonds and other asset classes. The average earning yield is presented in the following figure.

Fig.4.2.9: EY of Sample Banks



In above figure, the earning yield of Everest Bank, Bank of Kathmandu & Himalayan Bank is in the peak and is above 4%. The lowest yield can be seen of NSBL in range of 2% to 3%. Despite of all insurgencies and chaos in national economy, almost all the banks have the average earning yield. This indicates that the investors generally believe in banking sector rather than other sector.

4.2.10 Market price to Book value ratio

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

$$MV / BV\ RATIO \ \text{X} \ \frac{MPS}{Book\ Value\ per\ Share}$$

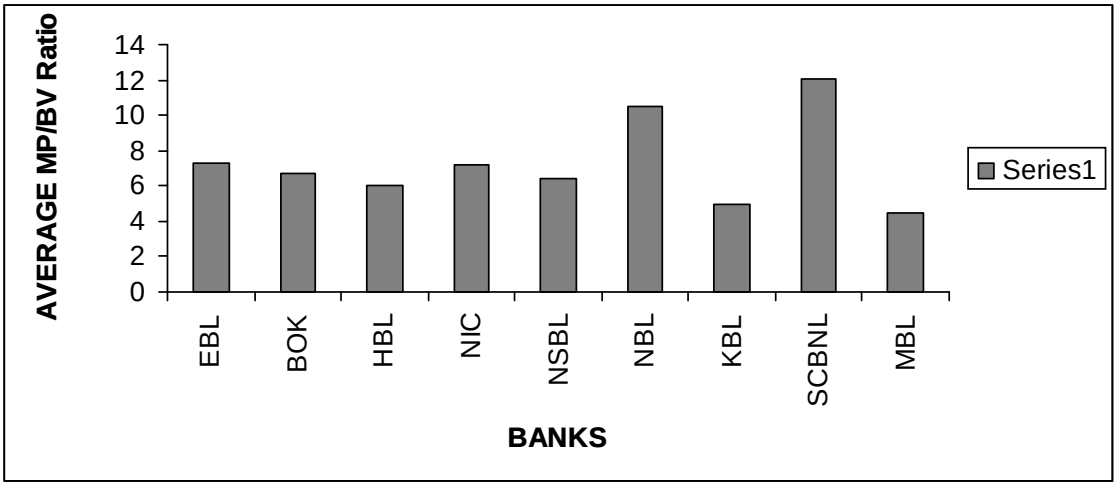
Table 4.2.10: MP/BV Ratio of Sample Banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	3.96	6.34	8.65	9.73	7.83	7.30
BOK	2.01	3.69	8.35	10.56	8.85	6.69
HBL	3.84	4.81	6.57	7.99	6.86	6.01
NIBL.	3.98	5.25	7.39	10.99	8.57	7.23
NSBL.	2.10	4.03	6.61	9.41	9.76	6.38
NBL	4.47	5.88	12.08	14.90	15.12	10.49
KBL	2.62	2.97	6.06	7.85	5.11	4.92
SCBL	5.55	8.06	11.52	17.01	18.35	12.10
MBL	2.21	2.46	5.09	9.08	3.65	4.50

Source: Annual Report of Sample Banks

The book value to market value ratio is another parameter that affects the behavior of stock price in market. Generally, a high ratio is considered to be good. In this criterion, the SCBNL, on average, seems the best among all selected samples. The SCBNL has the ratio of 12.10 while the lowest ratio is 4.50 of Machhapuchchhre Bank. In the year 2007/08 the stock of HBL had 18.35 times which means that the market price of the share is 18.35 times higher than its book value. The book value to market value ratio of other banks is very low compared with SCBNL & Nabil Bank. The following figure illustrates the average market value to book value ratio.

Fig.4.2.10: MP/BV Ratio of Sample Banks



The above figure shows that SCBNL has the highest MP/BV Ratio among all other banks

4.2.11 Liquidity Ratio

Liquidity is the pre-requisite for the very survival of the firm. The liquidity ratio measures the ability of a firm to meet short-term obligations and reflect the short-term financial strength of the firm. Thus current ratio has been used to measure liquidity.

$$Current\ Ratio\ \text{X}\ \frac{Current\ Assets}{Current\ Liabilites}$$

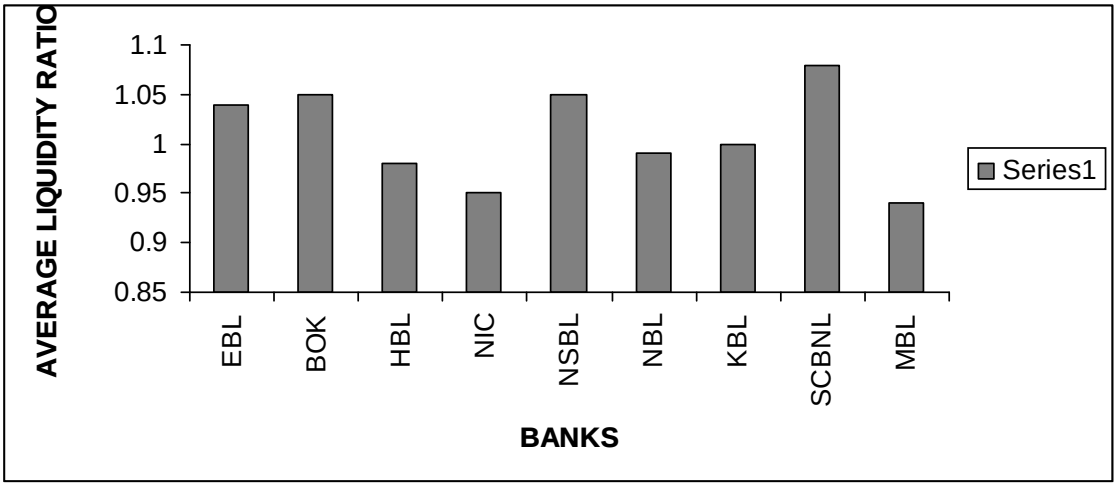
Table 4.2.11: Liquidity Ratio of Sample Banks

Years / Banks	2004/05	2005/06	2006/07	2007/08	2008/09	Average
EBL	0.98	1.04	1.04	1.05	1.11	1.04
BOK	1.02	1.04	1.03	1.06	1.10	1.05
HBL	1.03	1.02	0.99	0.85	1.02	0.98
NIBL.	1.13	1.11	0.74	0.76	0.99	0.95
NSBL.	1.05	1.02	1.02	1.05	1.11	1.05
NBL	1.06	1.06	0.86	0.91	0.98	0.99
KBL	0.87	1.01	1.03	1.03	1.06	1.00
SCBL	1.08	1.06	1.06	1.07	1.12	1.08
MBL	0.95	0.89	1	0.89	0.99	0.94

Source: Annual Report of Sample Banks

The liquidity position of SCBNL shows the highest ratio among all the selected banks. The lowest liquidity ratio is 0.94 of Machhapuchhre bank. In banking sector, a ratio of 1:1 is considered to be good and in this regard all samples banks are more or less equal to 1. The following figure shows the liquidity ratios of all selected banks.

Fig.4.2.11: Liquidity ratio of Sample Banks



The above figure shows that SCBNL has the highest Liquidity ratio among all the banks.

4.3 Analysis of relationship of price with earnings and dividend

We attempt to analyze whether earnings and dividends are directly affected or not with the rise and fall of prices. In other words, this study tries to know that if the earning per share raises the price of share also rises and if there is an increment in dividend per share of a certain company, the share price also increases. This relationship can be measured through various statistical tools. Amongst them, coefficient of correlation (Karl Pearson's) is widely used.

4.3.1 Coefficient of Correlation between Price and Earning

Correlation analysis establishes the closeness of relationship between two and more variables. It measures the degree of relationship or

association between variables. Karl Pearson's Coefficient of correlation is used to measure the degree of association among the variables. Correlations are useful because they can indicate a predictive relationship that can be exploited in practice. Correlations can also suggest possible causal, or mechanistic relationships.The formula used to calculate the coefficient of correlation is as:

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

A) Everest Bank Limited

Table 4.3.1(a): Correlation between EPS and MPS of Everest Bank Limited

Year	**EPS**	**MPS**
2004/05	54.22	870
2005/06	62.78	1379
2006/07	78.42	2430
2007/08	91.82	3132
2008/09	99.99	2455
Average	77.44	2053.20
Standard deviation	17.14836	815.0753
Coefficient of Correlation	0.89	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Everest Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 77.44 and the average market price per share is Rs.2053.20. The standard deviation of earning per share and market price per share is 19.17 and 2053.20 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.89. This shows that EPS and MPS are positively correlated.

b) **Bank of Kathmandu**

Table 4.3.1(b) Correlation between EPS and MPS of Bank of Kathmandu

Year	**EPS**	**MPS**
2004/05	30.1	430
2005/06	43.67	850
2006/07	43.5	1375
2007/08	59.94	2350
2008/09	54.68	1825
Average	46.37	1366
Standard deviation	10.32899	681.3765
Coefficient of Correlation	0.96	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Bank of Kathmandu from the year 2004/05 to 2008/09. The average of earning per share is Rs. 46.37 and the average market price per share is Rs.1366. The standard deviation of earning per share and market price per share is 11.55 and 761.80 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.96. This shows that EPS and MPS are positively correlated.

B) Himalayan Bank Limited

Table 4.3.1(c) Correlation between EPS and MPS of Himalayan Bank Limited

Year	**EPS**	**MPS**
2004/05	47.91	920
2005/06	59.24	1100
2006/07	60.66	1740
2007/08	62.74	1980
2008/09	61.9	1760
Average	58.49	1500
Standard deviation	5.4203	412.795
Coefficient of Correlation	0.83	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Himalayan Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 58.49 and the average market price per share is Rs.1500. The standard deviation of earning per share and market price per share is 6.06 and 461.52 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.83. This shows that EPS and MPS are positively correlated.

C) Nepal Investment Bank

Table 4.3.1(d) Correlation between EPS and MPS of Nepal Investment Bank

Year	**EPS**	**MPS**
2004/05	39.5	800
2005/06	59.35	1260
2006/07	62.57	1729
2007/08	57.87	2450
2008/09	37.42	1388
Average	51.34	1525.4
Standard deviation	10.65	549.88
Coefficient of Correlation	0.57	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Nepal Investment Bank from the year 2004/05 to 2008/09. The average of earning per share is Rs. 51.34 and the average market price per share is Rs.1525.40. The standard deviation of earning per share and market price per share is 11.90 and 614.79 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.57. This shows that EPS and MPS are positively correlated.

e) **Nepal SBI Bank Limited**

Table 4.3.1(e) Correlation between EPS and MPS of Nepal SBI Bank Limited

Year	**EPS**	**MPS**
2004/05	13.29	335
2005/06	18.27	612
2006/07	39.35	1176
2007/08	28.33	1511
2008/09	36.18	1900
Average	27.08	1106.80
Standard deviation	10.03	572.33
Coefficient of Correlation	0.82	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Nepal SBI Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 27.08 and the average market price per share is Rs.1106.80. The standard deviation of earning per share and market price per share is 11.21 and 639.89 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.82. This shows that EPS and MPS are positively correlated.

D) Nabil Bank Limited

Table 4.3.1(f) Correlation between EPS and MPS of NABIL Bank Limited

Year	**EPS**	**MPS**
2004/05	105.49	1505
2005/06	129.21	2240
2006/07	137.08	5050
2007/08	108.31	5275
2008/09	106.76	4899
Average	117.37	3793.8
Standard deviation	13.15	1590.37
Coefficient of Correlation	0.08	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of NABIL Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 117.37 and the average market price per share is Rs.3793.8. The standard deviation of earning per share and market price per share is 14.70 and 1778.09 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.08. This shows that EPS and MPS are positively correlated.

E) Kumari Bank Limited

Table 4.3.1(g) Correlation between EPS and MPS of Kumari Bank Limited

Year	**EPS**	**MPS**
2004/05	17.58	369
2005/06	16.59	443
2006/07	22.7	830
2007/08	16.35	1005
2008/09	22.04	700
Average	19.05	669.4
Standard deviation	2.75	237.00
Coefficient of Correlation	0.24	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Kumari Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 19.05 and the average market price per share is Rs.669.4. The standard deviation of earning per share and market price per share is 3.07 and 264.98 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.24. This shows that EPS and MPS are positively correlated.

F) Standard Chartered Bank Nepal Limited

Table 4.3.1(h) Correlation between EPS and MPS of Standard Chartered Bank Nepal

Year	EPS	MPS
2004/05	143.14	2345
2005/06	175.84	3775
2006/07	167.37	5900
2007/08	131.92	6830
2008/09	109.99	6010
Average	145.65	4972
Standard deviation	23.87	1656.79
Coefficient of Correlation	-0.36	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Standard Chartered Bank Nepal Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 145.65 and the average market price per share is Rs.4972. The standard deviation of earning per share and market price per share is 26.69 and 1852.35 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is -0.36. This shows that EPS and MPS are negatively correlated.

G) Machhapuchchhre Bank Limited

Table 4.3.1(i) Correlation between EPS and MPS of Machhapuchchhre Bank Ltd.

Year	EPS	MPS
2004/05	15.43	256
2005/06	18.74	320
2006/07	9.02	620
2007/08	10.35	1285
2008/09	8.33	420
Average	12.37	580.2
Standard deviation	4.04	373.31
Coefficient of Correlation	-0.47	

Source: Annual Report of Sample Banks

The table shows the earning per share and market price per share of Machhapuchchhre Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs. 12.37 and the average market price per share is Rs.580.20. The standard deviation of earning per share and market price per share is 4.52 and 417.37 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is -0.47. This shows that EPS and MPS are negatively correlated

4.3.2 Coefficient of Correlation between Price with Dividend

A correlation between price and dividend measure the relationship between these two important financial indicators. A rational investor looks for the high dividend and rather than high market price in long-term investment. For short-term investment, high market is more preferable than high dividend. A positive degree of correlation between these two variables shows that any increase in one variable increases the other and vice-versa. In this section of the study, it is attempted to find the relationship between these two variables for each sample banks during the period of five years.

a. Everest Bank Limited

Table 4.3.2(a): Correlation between DPS and MPS of Everest Bank Ltd

Year	**DPS**	**MPS**
2004/05	20	870
2005/06	25	1379
2006/07	30	2430
2007/08	30	3132
2008/09	30	2455
Average	27.00	2053.20
Standard deviation	4.00	815.08
Coefficient of Correlation	0.93	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 27 and

Rs. 2053.20. The standard deviation of dividend per share and market price is 4 and 815.08. The coefficient of correlation between dividend per share and market price per share is 0.93. This shows that DPS and MPS are positively correlated.

b. Bank of Kathmandu

Table 4.3.2(b): Correlation between DPS and MPS of Bank of Kathmandu

Year	**DPS**	**MPS**
2004/05	15	430
2005/06	48	850
2006/07	20	1375
2007/08	42.11	2350
2008/09	47.37	1825
Average	34.50	1366
Standard deviation	14.12	681.38
Coefficient of Correlation	0.51	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 34.50 and Rs. 1366. The standard deviation of dividend per share and market price is 14.12 and 681.38. The coefficient of correlation between dividend per share and market price per share is 0.51. This shows that DPS and MPS are positively correlated.

c. Himalayan Bank Limited

Table 4.3.2(c): Correlation between DPS and MPS of Himalayan Bank Ltd

Year	**DPS**	**MPS**
2004/05	31.58	920
2005/06	35	1100
2006/07	40	1740
2007/08	45	1980
2008/09	43.56	1760
Average	39.03	1500.00
Standard deviation	5.08	412.80
Coefficient of Correlation	0.97	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 39.03 and Rs. 1500. The standard deviation of dividend per share and market price is 5.08 and 412.80. The coefficient of correlation between dividend per share and market price per share is 0.97. This shows that DPS and MPS are positively correlated.

d. Nepal Investment Bank

Table 4.3.2(d): Correlation between DPS and MPS of Nepal Investment Bank

Year	**DPS**	**MPS**
2004/05	12.5	800
2005/06	55.46	1260
2006/07	30	1729
2007/08	40.83	2450
2008/09	20	1388
Average	31.76	1525.40
Standard deviation	15.21	549.88
Coefficient of Correlation	0.41	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 31.76 and Rs. 1525.40. The standard deviation of dividend per share and market price is 15.21 and 549.88. The coefficient of correlation between dividend per share and market price per share is .41. This shows that DPS and MPS are positively correlated.

e. Nepal SBI Bank Limited

Table 4.3.2(e): Correlation between DPS and MPS of Nepal SBI Bank Limited

Year	DPS	MPS
2004/05	0	335
2005/06	5	612
2006/07	47.59	1176
2007/08	0	1511
2008/09	42.11	1900
Average	18.94	1106.80
Standard deviation	21.30	572.33
Coefficient of Correlation	0.56	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 18.94 and Rs. 1106.80. The standard deviation of dividend per share and market price is 21.30 and 572.33. The coefficient of correlation between dividend per share and market price per share is 0.56. This shows that DPS and MPS are positively correlated.

f. Nabil Bank Limited

Table 4.3.2(f): Correlation between DPS and MPS of NABIL Bank Limited

Year	DPS	MPS
2004/05	70.00	1505.00
2005/06	85.00	2240.00
2006/07	140.00	5050.00
2007/08	100.00	5275.00
2008/09	85.00	4899.00
Average	96.00	3793.80
Standard deviation	23.96	1590.37
Coefficient of Correlation	0.66	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 96

and Rs. 3793.80. The standard deviation of dividend per share and market price is 23.96 and 1590.37. The coefficient of correlation between dividend per share and market price per share is 0.66. This shows that DPS and MPS are positively correlated.

g. Kumari Bank Limited

Table 4.3.2(g): Correlation between DPS and MPS of Kumari Bank Ltd

Year	DPS	MPS
2004/05	0.00	369.00
2005/06	21.05	443.00
2006/07	21.05	830.00
2007/08	10.53	1005.00
2008/09	10.58	700.00
Average	12.64	669.40
Standard deviation	7.87	237.00
Coefficient of Correlation	0.27	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 12.64 and Rs 669.40. The standard deviation of dividend per share and market price is 7.87 and 237.00. The coefficient of correlation between dividend per share and market price per share is 0.27. This shows that DPS and MPS are positively correlated.

h) Standard Chartered Bank Nepal Limited

Table 4.3.2(h): Correlation between DPS and MPS of Standard Chartered Bank Nepal

Year	DPS	MPS
2004/05	120.00	2345.00
2005/06	140.00	3775.00
2006/07	130.00	5900.00
2007/08	130.00	6830.00
2008/09	100.00	6010.00
Average	124.00	4972.00
Standard deviation	13.56	1656.79
Coefficient of Correlation	-0.15	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 124 and Rs. 4972. The standard deviation of dividend per share and market price is 13.56 and 1656.79 respectively. It shows that the market price is more volatile in comparison with dividend. The dividend per share is less volatile that means it can attract investors. The coefficient of correlation between dividend per share and market price per share is -0.15. This shows that DPS and MPS are negatively correlated.

I) **Machhapuchchhre Bank Limited**

Table 4.3.2(i): Correlation between DPS and MPS of Machhapuchchhre Bank Limited

Year	DPS	MPS
2004/05	0.00	256.00
2005/06	15.79	320.00
2006/07	0.00	620.00
2007/08	21.05	1285.00
2008/09	0.00	420.00
Average	7.37	580.20
Standard deviation	9.18	373.31
Coefficient of Correlation	0.63	

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs. 7.37 and Rs. 580.2. The standard deviation of dividend per share and market price is 9.18 and 373.31 respectively.. The coefficient of correlation between dividend per share and market price per share is 0.63. This shows that DPS and MPS are positively correlated. Any increment in DPS will result positively on the market price of share.

Chapter V
Summary, Conclusion And Recommendation

5.1 Summary

Security market is one of the components of capital market. It has wide implementation for the buyer and seller of all securities and all related agencies. It has a significant role to the development of capital market as well as overall economy. Basically, it affects the economy through creation of liquidity, marketability, etc. Liquid equity markets make less expensive to trade equities, reduce disincentive to investing the lag duration projects because investors can easily sell. It also facilitates higher to choose and invest in higher return projects and best productivity growth. More liquidity makes easier to sell. Like liquidity, market efficiency is another most profound idea to affect the investment decision process in security market. This means that efficiently proved markets in which this price of security do not depart for any length of time from justified economic values. The security values are also determined by investor's expectation about earning risk and so on. In efficient market values is going to be changed by reacting with new information. Thus, securities are efficiently priced on a continuous basis.

The stock market of Nepal is still in preliminary stage & it is developing in slow rate. It needs help from all concerned bodies to function properly. The government should formulate effective rules and regulations and implement it properly to develop the stock market. The listed companies should always be ready to help the market by obeying the rules and regulations, timely disclosing and submitting annual financial statement, avoiding rumors and not manipulating the price of stock.

The numbers of listed companies are increasing slowly over the study period. The number was 125 in 2005/06 & just increased to 149 in 2008/09. The market capitalization has also increased from Rs 366247.56

million in 2007/08 to Rs 512939.07 million. The number and volume of transactions are also in increasing trend. The percentage of turnover to market capitalization has been decreasing trend it has decreased from 6.23 in 2007/08 to 4.23 in 2008/09 & also percentage of turnover to paid up valuation has sharply decreased from 77.45 to 35.46 frm 2007/08 to 2008/09. An alarming sign is that the turnover has also decreased from 22820.76 million in 2007/08 to 21681.07 million in 2008/09. the rate of growth in no of shares traded is very slow compared to past years.

Using different financial tools, the company's performance has been analyzed to relate their market price with EPS, DPS, Book Value, and liquidity, return on assets and return on equity. This analysis shows a mixed behavior in these relationships. Some companies having low EPS have high price and companies having high EPS have low price. The same fluctuating trend follows in the case of DPS also. The summary table presented below gives the exact idea about the company's performance in major aspects.

Table 5.1: Summarized Table of Performance of Different Banks

Description	**EBL**	**BOK**	**HBL**	**NIB**	**NSBL**	**NABIL**	**KBL**	**SCBNL**	**MBL**
EPS	77.45	46.38	58.49	51.34	27.08	117.37	19.05	145.65	12.37
DPS	27.00	34.50	39.03	31.76	18.94	96	12.69	124	7.37
MPS	2053.20	1366.00	1500.00	1525.40	1106.80	3793.80	669.40	4972.00	580.20
DPR	35.53	75.52	66.61	59.21	52.94	81.94	66.40	86.12	57.53
DY	1.51	3	2.73	2.16	1.42	2.97	1.97	2.92	1.31
EY	4.20	4.17	4.15	3.66	2.82	3.94	3.20	3.47	3.23
P/E	25.47	27.59	25.29	29.51	38.27	32.61	35.28	35.90	55.35
MV/BV	7.30	6.69	6.01	7.23	6.38	10.49	4.92	12.10	4.50
ROA	1.55	1.83	1.56	1.65	1.15	2.78	1.26	2.49	1.10
ROE	28.36	22.58	23.65	24.03	15.74	32.31	13.80	34.08	9.93
LIQUIDITY	1.04	1.05	0.98	0.95	1.05	0.99	1.	1.08	0.94

The relationship between MPS and EPS, MPS and DPS has been found by using the correlation techniques. The result of correlation study is tabulated below:

Table 5.2: Summarized Table of EPS, DPS, MPS and its Correlation

Banks	EPS	DPS	MPS	*Correlation between MPS & EPS*	*Correlation between MPS& DPS*
1. EBL	77.45	27	2053.20	0.89	0.92
2. BoK	46.38	34.50	1366.00	0.96	0.51
3. HBL	58.49	39.03	1500.00	0.83	0.97
4. NIB	51.34	31.76	1525.40	0.57	0.41
5. NSBL	27.08	18.94	1106.80	0.82	0.56
6. NABIL	117.37	96	3793.80	0.08	0.66
7. KBL	19.05	12.69	669.40	0.24	0.27
8. SCBNL	145.65	124	4972.00	-0.36	-0.15
9. MBL	12.37	7.37	580.20	-0.47	0.63

5.2 Conclusions

While assessing the performance of banking sector in stock market the following conclusions are drawn from the analysis:

1. The development of stock market is not in the satisfactory level. Only the banking sector is having the high performance. The overall turnover and the growth have a decreasing trend whereas paid up value & market capitalization has the increasing trend.
2. The market price has high variability during study period. SCBNL again has high average price of Rs.4972 and Machhapuchchhre Bank has the lowest market price of Rs.580.20. This high market price shows that SCBNL has the better performance than others.
3. The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, it is believed that high ROE will raise the market price per share. The ROE of SCBNL is the highest among all sample banks so does its market price of stock. The ROE of Machhapuchchhre Bank is the lowest among all banks and so is its maret price of stock. This shows that higher the return on equity higher the price of share.
4. The overall profit of the company from the view of ordinary shareholders is the EPS. The Standard Chartered Bank Nepal

Limited has the high EPS of Rs.145.65 whereas Machhapuchchhre Bank has the low EPS of Rs.12.37. The better the earning, the better is the performance.

5. There is a vast fluctuation in the dividend per share. SCBNL shows high dividend of Rs.124 whereas MBL shows the lowest of all i.e. Rs. 7.37. The investor who is eager to invest for the long term chooses the company with high dividend and one which provide high dividend has high price of share.
6. All the banks have the healthy and positive P/E multiples. Earning and price relation shows the mixed behavior. Banks like Machhapuchchhre Bank has the highest P/E multiple among the entire sample banks i.e., 55.35 which shows a good performance due to their managerial efficiency and professional management whereas SCBNL has low but consistent P/E ratio with average P/E ratio of 35.90. P/E multiple always does not provide the clear picture for the price of stock. Investors should always look for consistent P/E multiple rather than highest P/E multiple.
7. Among the sample banks SCBNL bank has the highest average dividend payout ratio of 86.12. EBL has the least dividend payout ratio of 35.53. NABIL and SCBNL are regularly paying dividend while other banks are irregular on paying dividend.
8. The earning yield, which measures the yield of outstanding stock, of Everest Bank is the highest with all selected sample banks, which was 4.20%. Similarly the lowest average earning yield was registered by NSBL with 2.82%. However, each bank has good earning yield which is one of the reasons why banking sector is dominating the stock market. On the other hand, the dividend yield, which measures the return of each outstanding stock, is irregular. Although all the sample banks have satisfactory earning yield but the dividend yield is very low except Kumari. All the Bank retained maximum or all amount of earning for future investment. The dividend yield of Kumari has the highest with 9.90% while the dividend yield of NSBL is the lowest with 0.40%. The study found a

mixed behavior between price and dividend, price and earning during the period of study.

9. The market value to book value that shows the efficiency of stock price in market than the book. In this regard, all the selected samples have ratio greater than 4.50. This shows the market price of banks are exceeding their book values. The stock of Nabil and SCBNL are priced 10.49 & 12.10 times more than its book value. Respectively. The lowest ratio is of Machhapuchchhre Bank with 4.50 times which can be considered satisfactory.
10. The ROA shows the overall effectiveness of management in generating profits with its available assets. The management of SCBNL has utilized its available assets more efficiently and effectively to generate profits than other banks. The highest ROA generally push the market price upward. The SCBNL & Nabil bank has highest ROA and highest MPS too. The ROA of Machhapuchchhre Bank is the lowest with 1.10 and its MPS is also low with Rs 580.20. Although BoK has higher ROA than EBL, it has lower market price than EBL. It shows mixed relationship between ROA and market price per share.
11. The liquidity ratio measures the ability of a firm to meet short-term obligations. The relationship between liquidity position and market price shows a mixed behavior. The liquidity ratio of SCBNL is the highest and its market price is also the highest. While liquidity ratio of MBL is the lowest as its market price is also lower than other banks.
12. The coefficient of correlation between DPS and MPS shows mixed pattern. The degree of correlation between the DPS and MPS of HBL is the highest with 0.97 that is if DPS increases by 100% the MPS also increases by 97 %. All other banks DPS and MPS is positively correlated except SCBNL.
13. The coefficient of correlation between EPS and MPS shows mixed pattern. The degree of correlation between the EPS and MPS of BOK is the highest with 0.96. It indicates that if the EPS increased by 100%, the MPS will also increase by 96% and vice-versa. All the

sample banks have positive correlation except SCBNL & Machhapuchchhre Bank that has negative correlation with –0.36 & -0.47 respectively. It shows that if the EPS increase/decrease by 100% the MPS will decrease/increase by 36% & 47% for SCBNL & Machhapuchchhre Bank.

5.3 Recommendations

After analyzing the price behavior of stock in stock market with the help of various literatures, relevant data, financial tools and techniques following recommendation can be outlined.

- ✓ The price of stock widely depends upon EPS, DPS. ROE, ROA. The Nepalese Stock market authorities take some effective initiative to control the random fluctuation of EPS and MPS and establish the system of regular monitoring and evaluation of stock price.
- ✓ The government should regulate & establish standard tools and techniques and all the public companies follow the same, so that genuine & accurate evaluation can be made between companies.
- ✓ The government should not only make policies for capital market development but also implement these policies timely and appropriately.
- ✓ The investment decision of the individuals is based to a large extent on signals they get from capital market. The market mechanism should be able provide reliable information timely and widely. The listed company's data, their performance appraisal their conduction of work their productivity their commitment to NPSE should be updated and analyzed time and again.
- ✓ Concrete steps should be undertaken to make all the public limited companies to disclosure of factual information about themselves and their financial performance in stipulated time.
- ✓ There should be proper mechanism for evaluating & reviewing the company's data and if any company is found with misappropriation against any law, proper action should be taken.
- ✓ The stock exchange should be investors' focused and market oriented along with strong operation with effective management.

- ✓ There should be good coordination and cooperation between concerned regulatory bodies.
- ✓ Buying and selling procedure of shares should be systematic, fast and less time consuming.
- ✓ The regulatory body should regulate and discourage any negative rumors that may affect the price of stock. The behavior of stock price should be free and fair without any manipulation.
- ✓ The investors should analyze all the aspects & factors that may affect the price of share before investing in any company's share. The government should make proper arrangement for general public so that they can get accurate and expert's analysis about the financial positions of any company and also risk involved. There should be proper credit ratings agencies and investment banks to analyze the companies.
- ✓ The company should have close monitoring system to check the behaviors of stock price and should make an effort to uplift the market price than its competitors.
- ✓ The government should encourage and educate about the stock market so that more and more people can benefit and which eventually help in economic development of the country.

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APPENDIX 1

BOOK VALUE OF SHARE OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	219.87	217.67	280.82	321.77	313.64	270.75
BOK	213.60	230.37	164.68	222.51	206.25	207.48
HBL	239.59	228.72	264.74	247.95	256.52	247.50
NIBL	201.00	240.00	234.00	223.00	162.00	212.00
NSBL	159.54	151.78	178.04	160.57	194.68	168.92
NBL	337.00	381.00	418.00	354.00	324.00	362.80
KBL	141.00	149.00	137.00	128.00	137.00	138.40
SCBNL	422.38	468.22	512.12	401.52	327.53	426.35
MBL	115.95	130.22	121.74	141.59	114.93	124.89
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 2

EPS OF SAMPLE BANKS

YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	54.22	62.78	78.42	91.82	99.99	77.45
BOK	30.10	43.67	43.50	59.94	54.68	46.38
HBL	47.91	59.24	60.66	62.74	61.90	58.49
NIBL	39.50	59.35	62.57	57.87	37.42	51.34
NSBL	13.29	18.27	39.35	28.33	36.18	27.08
NBL	105.49	129.21	137.08	108.31	106.76	117.37
KBL	17.58	16.59	22.70	16.35	22.04	19.05
SCBNL	143.14	175.84	167.37	131.92	109.99	145.65
MBL	15.43	18.74	9.02	10.35	8.33	12.37

SOURCE: ANNUAL REPORT OF SAMPLE BANKS

APPENDIX 3

DPS OF SAMPLE BANKS

YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	-	25.00	10.00	20.00	30.00	17.00
BOK	15.00	18.00	20.00	2.11	7.37	12.50
HBL	11.58	30.00	15.00	25.00	12.00	18.72
NIBL	12.50	20.00	5.00	7.50	20.00	13.00
NSBL	-	5.00	12.59	-	2.11	3.94
NBL	70.00	85.00	100.00	60.00	35.00	70.00
KBL	-	105.00	105.00	53.00	55.00	63.60
SCBNL	120.00	130.00	80.00	80.00	50.00	92.00
MBL	-	69.00	-	105.00	-	34.80

SOURCE: ANNUAL REPORT OF SAMPLE BANKS

APPENDIX 4

MPS OF SAMPLE BANKS

YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	870.00	1,379.00	2,430.00	3,132.00	2,455.00	2,053.20
BOK	430.00	850.00	1,375.00	2,350.00	1,825.00	1,366.00
HBL	920.00	1,100.00	1,740.00	1,980.00	1,760.00	1,500.00
NIBL	800.00	1,260.00	1,729.00	2,450.00	1,388.00	1,525.40
NSBL	335.00	612.00	1,176.00	1,511.00	1,900.00	1,106.80
NBL	1,505.00	2,240.00	5,050.00	5,275.00	4,899.00	3,793.80
KBL	369.00	443.00	830.00	1,005.00	700.00	669.40
SCBNL	2,345.00	3,775.00	5,900.00	6,830.00	6,010.00	4,972.00
MBL	256.00	320.00	620.00	1,285.00	420.00	580.20

SOURCE: ANNUAL REPORT OF SAMPLE BANKS

APPENDIX 5

P/E RATIO OF SAMPLE BANKS

YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	16.04	21.97	30.99	34.11	24.25	25.47
BOK	14.29	19.46	31.61	39.21	33.37	27.59
HBL	19.20	18.57	28.69	31.56	28.43	25.29
NIBL	20.25	21.23	27.63	42.33	36.10	29.51
NSBL	25.11	33.49	26.89	53.34	52.52	38.27
NBL	14.27	17.34	36.84	48.70	45.89	32.61
KBL	20.99	26.61	35.56	61.47	31.76	35.28
SCBNL	16.38	21.47	35.25	51.77	54.64	35.90
MBL	16.59	17.08	68.74	124.19	50.14	55.35

SOURCE: ANNUAL REPORT OF SAMPLE BANKS

APPENDIX 6

DPR OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	-	39.82	12.75	21.78	30.00	20.87
BOK	49.83	41.22	45.98	3.52	13.48	30.81
HBL	24.17	50.64	24.73	39.85	19.39	31.75
NIBL	31.65	33.70	7.99	12.96	53.45	27.95
NSBL	-	27.37	31.99	-	5.83	13.04
NBL	66.36	65.78	72.95	55.40	32.78	58.65
KBL	-	632.91	462.56	324.16	249.55	333.83
SCBNL	83.83	73.93	47.80	60.64	45.46	62.33
MBL	-	368.20	-	1,014.49	-	276.54
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 7

DY OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	-	1.81	0.41	0.64	1.22	0.82
BOK	3.49	2.12	1.45	0.09	0.40	1.51
HBL	1.26	2.73	0.86	1.26	0.68	1.36
NIBL	1.56	1.59	0.29	0.31	1.44	1.04
NSBL	-	0.82	1.07	-	0.11	0.40
NBL	4.65	3.79	1.98	1.14	0.71	2.46
KBL	-	23.70	12.65	5.27	7.86	9.90
SCBNL	5.12	3.44	1.36	1.17	0.83	2.38
MBL	-	21.56	-	8.17	-	5.95
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 8

MARKET PRICE TO BOOK VALUE OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	3.96	6.34	8.65	9.73	7.83	7.30
BOK	2.01	3.69	8.35	10.56	8.85	6.69
HBL	3.84	4.81	6.57	7.99	6.86	6.01
NIBL	3.98	5.25	7.39	10.99	8.57	7.23
NSBL	2.10	4.03	6.61	9.41	9.76	6.38
NBL	4.47	5.88	12.08	14.90	15.12	10.49
KBL	2.62	2.97	6.06	7.85	5.11	4.92
SCBNL	5.55	8.06	11.52	17.01	18.35	12.10
MBL	2.21	2.46	5.09	9.08	3.65	4.50
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 9

LIQUIDITY RATIO OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	0.98	1.04	1.04	1.05	1.11	1.04
BOK	1.02	1.04	1.03	1.06	1.1	1.05
HBL	1.03	1.02	0.99	0.85	1.02	0.98
NIBL	1.13	1.11	0.74	0.76	0.99	0.95
NSBL	1.05	1.02	1.02	1.05	1.11	1.05
NBL	1.06	1.06	0.86	0.91	0.98	0.99
KBL	0.87	1.01	1.03	1.03	1.06	1
SCBNL	1.08	1.06	1.06	1.07	1.12	1.08
MBL	0.95	0.89	1	0.89	0.99	0.94
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 10

RETURN TO TOTAL ASSETS OF SAMPLE BANKS						
YEARS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE

BANKS						
EBL	1.40	1.50	1.40	1.70	1.73	1.55
BOK	1.42	1.65	1.80	2.04	2.25	1.83
HBL	1.11	1.55	1.47	1.76	1.91	1.56
NIBL	1.42	1.61	1.79	1.77	1.68	1.65
NSBL	0.55	0.90	1.83	1.44	1.02	1.15
NBL	3.06	3.23	2.72	2.32	2.55	2.78
KBL	1.13	1.15	1.43	1.16	1.41	1.26
SCBNL	2.46	2.56	2.42	2.46	2.53	2.49
MBL	1.31	1.48	0.69	1.00	1.00	1.10
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

APPENDIX 11

RETURN TO COMMON EQITY OF SAMPLE BANKS						
YEARS / BANKS	2004/05	2005/06	2006/07	2007/08	2008/09	AVERAGE
EBL	24.65	28.84	27.92	28.53	31.88	28.36
BOK	14.09	18.93	26.41	26.94	26.51	22.58
HBL	19.99	25.90	22.91	25.30	24.13	23.65
NIBL	19.65	24.73	26.74	25.95	23.10	24.03
NSBL	8.33	12.04	22.10	17.64	18.58	15.74
NBL	31.30	33.92	32.79	30.59	32.95	32.31
KBL	12.46	11.13	16.57	12.77	16.08	13.80
SCBNL	33.89	37.55	32.68	32.68	33.58	34.08
MBL	13.30	14.39	7.41	7.30	7.25	9.93
SOURCE: ANNUAL REPORT OF SAMPLE BANKS						

Appendix 13: Standard Coefficient & Correlation between Price and Dividend of Sample Banks

Appendix 13A							
BANK: EBL							
YEAR	DPS (X)	MPS (Y)	x X(X Z $\overline{X}$)	y X(Y Z$\overline{Y}$)	x^2	y^2	xy
2004/05	20.00	870.00	-7	-1183.2	49	1399962	8282.4
2005/06	25.00	1379.00	-2	-674.2	4	454545.6	1348.4
2006/07	30.00	2430.00	3	376.8	9	141978.2	1130.4
2007/08	30.00	3132.00	3	1078.8	9	1163809	3236.4
2008/09	30.00	2455.00	3	401.8	9	161443.2	1205.4
Total	135.00	10266.00			80	3321739	15203

We have,

$$Mean(\overline{X}) \text{ X } \frac{X}{N} \quad \text{X } \frac{135}{5} = 27.00$$

$$Mean(\overline{Y}) \text{ X } \frac{Y}{N} \quad \text{X } \frac{10266}{5} = 2053.20$$

$$S\tan dard\ Deviation(X) \text{ X } \frac{\sqrt{(X \text{ Z } \overline{X})^2}}{\sqrt{N}} \text{X} \sqrt{\frac{x^2}{N}} \quad \text{X } \sqrt{\frac{80}{5}} = 4.00$$

$$S\tan dard\ Deviation(Y) \text{ X } \frac{\sqrt{(Y \text{ Z} \overline{Y})^2}}{\sqrt{N}} \text{X} \sqrt{\frac{y^2}{N}} \quad \text{X } \sqrt{\frac{1222}{5}} = 815.08$$

Coefficient of Correlation = r (X,Y) = $\frac{\sum(X \text{ Z } \overline{X})(Y \text{ Z } \overline{Y})}{\sqrt{\sum(X \text{ Z } \overline{X})^2}\sqrt{\sum(Y \text{ Z } \overline{Y})^2}} \text{X} \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$\text{X} \frac{15203.00}{\sqrt{80}\sqrt{3321739}} = 0.93$$

Appendix 13B							
BANK: BOK							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2004/05	15	430.00	-19.496	-936	380.094	876096	18248.3
2005/06	48	850.00	13.504	-516	182.358	266256	-6968.1
2006/07	20	1375.00	-14.496	9	210.134	81	-130.46
2007/08	42.11	2350.00	7.614	984	57.973	968256	7492.18
2008/09	47.37	1825.00	12.874	459	165.74	210681	5909.17
Total	172.48	6830.00			996.299	2321370	24551.1

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{172.48}{5} = 34.50$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{6830.00}{5} = 1366.00$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{996.299}{5}} = 14.12$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{2321370}{5}} = 681.38$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{24551.1}{\sqrt{996.299}\sqrt{2321370}} = 0.51$$

Appendix 13C							
BANK: HBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2004/05	31.58	920.00	-7.448	-580	55.4727	336400	4319.84
2005/06	35	1100.00	-4.028	-400	16.2248	160000	1611.2
2006/07	40	1740.00	0.972	240	0.94478	57600	233.28
2007/08	45	1980.00	5.972	480	35.6648	230400	2866.56
2008/09	43.56	1760.00	4.532	260	20.539	67600	1178.32
Total	195.14	7500.00			128.846	852000	10209.2

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{195.14}{5} = 39.03$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{7500.00}{5} = 1500.00$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{128.846}{5}} = 5.08$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{852000\ .00}{5}} = 412.80$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{10209.20}{\sqrt{128.846}\sqrt{852000}} = 0.97$$

Appendix 13D							
BANK: NIBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2004/05	12.5	800.00	-19.258	-725.4	370.871	526205	13969.8
2005/06	55.46	1260.00	23.702	-265.4	561.785	70437.2	-6290.5
2006/07	30	1729.00	-1.758	203.6	3.09056	41453	-357.93
2007/08	40.83	2450.00	9.072	924.6	82.3012	854885	8387.97
2008/09	20	1388.00	-11.758	-137.4	138.251	18878.8	1615.55
Total	158.79	7627.00			1156.3	1511859	17324.8

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{158.79}{5} = 31.76$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{7627.00}{5} = 1525.40$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{1156.30}{5}} = 15.21$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{1511859\ .20}{5}} = 549.88$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{17324.80}{\sqrt{1156.3}\sqrt{1511859.00}} = 0.41$$

Appendix 13E							
BANK: NSBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \overline{X})$	$y = (Y - \overline{Y})$	x^2	y^2	xy
2004/05	0	335.00	-18.94	-771.8	358.724	595675	14617.9
2005/06	5	612.00	-13.94	-494.8	194.324	244827	6897.51
2006/07	47.59	1176.00	28.65	69.2	820.823	4788.64	1982.58
2007/08	0	1511.00	-18.94	404.2	358.724	163378	-7655.5
2008/09	42.11	1900.00	23.17	793.2	536.849	629166	18378.4
Total	94.70	5534.00			2269.44	1637835	34220.9

We have,

$$Mean(\overline{X}) = \frac{\sum X}{N} = \frac{94.70}{5} = 18.94$$

$$Mean(\overline{Y}) = \frac{\sum Y}{N} = \frac{5534.00}{5} = 1106.08$$

$$Standard\ Deviation(X) = \frac{\sqrt{\sum (X - \overline{X})^2}}{\sqrt{N}} = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2269.44}{5}} = 21.30$$

$$Standard\ Deviation(Y) = \frac{\sqrt{\sum (Y - \overline{Y})^2}}{\sqrt{N}} = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1637834.80}{5}} = 572.33$$

Coefficient of Correlation = r (X,Y) = $\frac{\sum (X - \overline{X})(Y - \overline{Y})}{\sqrt{\sum (X - \overline{X})^2}\sqrt{\sum (Y - \overline{Y})^2}} = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}}$

$$= \frac{34220.90}{\sqrt{2269.44}\sqrt{1637834.80}} = 0..56$$

Appendix 13F							
BANK: NBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2004/05	70	1505.00	-26	-2288.8	676	5238605	59508.8
2005/06	85	2240.00	-11	-1553.8	121	2414294	17091.8
2006/07	140	5050.00	44	1256.2	1936	1578038	55272.8
2007/08	100	5275.00	4	1481.2	16	2193953	5924.8
2008/09	85	4899.00	-11	1105.2	121	1221467	-12157
Total	480.00	18969.00			2870	12646359	125641

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{480.00}{5} = 96.00$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{18969}{5} = 1590.37$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{2870.00}{5}} = 23.96$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{12646359.}{5}} = 3793.80$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{125641.00}{\sqrt{2870.00}\sqrt{12646359.00}} = 0.66$$

Appendix 13G							
BANK: KBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x^2	y^2	xy
2004/05	0	369.00	-12.642	-300.4	159.82	90240.16	3797.66
2005/06	21.05	443.00	8.408	-226.4	70.6945	51256.96	-1903.6
2006/07	21.05	830.00	8.408	160.6	70.6945	25792.36	1350.32
2007/08	10.53	1005.00	-2.112	335.6	4.46054	112627.4	-708.79
2008/09	10.58	700.00	-2.062	30.6	4.25184	936.36	-63.097
Total	63.21	3347.00			309.921	280853.2	2472.53

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{63.21}{5} = 12.64$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{3347}{5} = 669.40$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} \times \sqrt{\frac{x^2}{N}} = \sqrt{\frac{309.921}{5}} = 7.87$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} \times \sqrt{\frac{y^2}{N}} = \sqrt{\frac{28085320}{5}} = 237.00$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{2472.53}{\sqrt{309.921}\sqrt{280853.20}} = 0.27$$

Appendix 13H							
BANK: SCBNL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	120	2345.00	-4	-2627	16	6901129	10508
2005/06	140	3775.00	16	-1197	256	1432809	-19152
2006/07	130	5900.00	6	928	36	861184	5568
2007/08	130	6830.00	6	1858	36	3452164	11148
2008/09	100	6010.00	-24	1038	576	1077444	-24912
Total	620.00	24860.00			920	13724730	-16840

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{620.00}{5} = 124.00$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{24860.00}{5} = 4972.00$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{920.00}{5}} = 13.56$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{13724730.00}{5}} = 1656.79$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{-16840.00}{\sqrt{920.00}\sqrt{13724730}} = -0.15$$

Appendix 13I							
BANK: MBL							
YEAR	DPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	0	256.00	-7.368	-324.2	54.2874	105105.6	2388.71
2005/06	15.79	320.00	8.422	-260.2	70.9301	67704.04	-2191.4
2006/07	0	620.00	-7.368	39.8	54.2874	1584.04	-293.25
2007/08	21.05	1285.00	13.682	704.8	187.197	496743	9643.07
2008/09	0	420.00	-7.368	-160.2	54.2874	25664.04	1180.35
Total	36.84	2901.00			420.989	696800.8	10727.5

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{36.84}{5} = 7.37$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{2901.00}{5} = 580.20$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{420.989}{5}} = 9.18$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{696800.80}{5}} = 373.31$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{10727.50}{\sqrt{420.989}\sqrt{(696800.80)}} = -0.63$$

Appendix 14: Standard Coefficient & Correlation between Price and Earning of Sample Banks

Appendix 14A							
BANK: EBL							
YEAR	EPS (X)	MPS (Y)	x X $(X$ Z $\overline{X})$	y X$(Y$ Z$\overline{Y})$	x2	y2	xy
2004/05	54.22	870.00	-23.226	-1183.2	539.447	1399962.2	27481
2005/06	62.78	1379.00	-14.666	-674.2	215.092	454545.64	9887.82
2006/07	78.42	2430.00	0.974	376.8	0.94868	141978.24	367.003
2007/08	91.82	3132.00	14.374	1078.8	206.612	1163809.4	15506.7
2008/09	99.99	2455.00	22.544	401.8	508.232	161443.24	9058.18
Total	387.23	10266.00			1470.33	3321738.8	62300.7

We have,

$$Mean(\overline{X}) \text{ X } \frac{X}{N} \quad \text{X } \frac{387.23}{5} = 77.45$$

$$Mean(\overline{Y}) \text{ X } \frac{Y}{N} \quad \text{X } \frac{10266}{5} = 2053.20$$

$$S\tan dard\ Deviation(X) \text{ X } \frac{\sqrt{(X \text{ Z } \overline{X})^2}}{\sqrt{N}} \text{X} \sqrt{\frac{x^2}{N}} \quad \text{X } \sqrt{\frac{1470.33}{5}} = 17.15$$

$$S\tan dard\ Deviation(Y) \text{ X } \frac{\sqrt{(Y \text{ Z} \overline{Y})^2}}{\sqrt{N}} \text{X} \sqrt{\frac{y^2}{N}} \quad \text{X } \sqrt{\frac{1222}{5}} = 815.08$$

Coefficient of Correlation = r (X,Y) = $\frac{\int X \text{ Z } \overline{X} \text{Ä} \int Y \text{ Z} \overline{Y} \text{Ä}}{\sqrt{\int X \text{ Z } \overline{X} \text{Ä}^2} \sqrt{\int Y \text{ Z} \overline{Y} \text{Ä}^2}} \text{X} \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$\text{X} \frac{62300.7}{\sqrt{1470.33}\sqrt{3321738.80}} = 0.89$$

Appendix 14B							
BANK: BOK							
YEAR	EPS	MPS	$x\,X(X\ Z\ \overline{X})$	$y\,X(Y\,Z\overline{Y})$	x2	y2	xy
2004/05	30.10	430.00	-16.278	-936	264.973	876096	15236.2
2005/06	43.67	850.00	-2.708	-516	7.33326	266256	1397.33
2006/07	43.50	1375.00	-2.878	9	8.28288	81	-25.902
2007/08	59.94	2350.00	13.562	984	183.928	968256	13345
2008/09	54.68	1825.00	8.302	459	68.9232	210681	3810.62
Total	231.89	6830.00			533.44	2321370	33763.3

We have,

$$Mean(\overline{X})\ X\ \frac{X}{N} \quad X\ \frac{231.89}{5} = 46.38$$

$$Mean(\overline{Y})\ X\ \frac{Y}{N} \quad X\ \frac{6830.00}{5} = 1366.00$$

$$S\tan dard\ Deviation(X)\ X\ \frac{\sqrt{(X\ Z\overline{X})^2}}{\sqrt{N}} X \sqrt{\frac{x^2}{N}} \quad X\ \sqrt{\frac{533.44}{5}} = 10.33$$

$$S\tan dard\ Deviation(Y)\ X\ \frac{\sqrt{(Y\ Z\overline{Y})^2}}{\sqrt{N}} X \sqrt{\frac{y^2}{N}} \quad X\ \sqrt{\frac{2321370}{5}} = 681.38$$

Coefficient of Correlation = $r(X,Y) = \frac{\int X\ Z\overline{X}\,\int Y\ Z\overline{Y}}{\sqrt{\int X\ Z\overline{X}^2}\sqrt{\int Y\ Z\overline{Y}^2}} X \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$X \frac{33763.00}{\sqrt{533.44}\sqrt{2321370.70}} = 0.96$$

Appendix 14C							
BANK: HBL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	47.91	920.00	-10.58	-580	111.936	336400	6136.4
2005/06	59.24	1100.00	0.75	-400	0.5625	160000	-300
2006/07	60.66	1740.00	2.17	240	4.7089	57600	520.8
2007/08	62.74	1980.00	4.25	480	18.0625	230400	2040
2008/09	61.90	1760.00	3.41	260	11.6281	67600	886.6
Total	292.45	7500.00			146.898	852000	9283.8

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{292.45}{5} = 58.49$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{7500.00}{5} = 1500.00$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{146.898}{5}} = 5.42$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{852000.00}{5}} = 412.80$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{9283.80}{\sqrt{146.898}\sqrt{852000}} = 0.83$$

Appendix 14D							
BANK: NIBL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	39.50	800.00	-11.842	-725.4	140.233	526205.16	8590.19
2005/06	59.35	1260.00	8.008	-265.4	64.1281	70437.16	-2125.3
2006/07	62.57	1729.00	11.228	203.6	126.068	41452.96	2286.02
2007/08	57.87	2450.00	6.528	924.6	42.6148	854885.16	6035.79
2008/09	37.42	1388.00	-13.922	-137.4	193.822	18878.76	1912.88
Total	256.71	7627.00			566.86	1511859.2	16699.6

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{256.71}{5} = 51.34$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{7627.00}{5} = 1525.40$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} \times \sqrt{\frac{x^2}{N}} = \sqrt{\frac{566.86}{5}} = 10.65$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} \times \sqrt{\frac{y^2}{N}} = \sqrt{\frac{1511859.20}{5}} = 549.88$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{16699.60}{\sqrt{566.86}\sqrt{1511859.20}} = 0.57$$

Appendix 14E							
BANK: NSBL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	13.29	335.00	-13.794	-771.8	190.274	595675.24	10646.2
2005/06	18.27	612.00	-8.814	-494.8	77.6866	244827.04	4361.17
2006/07	39.35	1176.00	12.266	69.2	150.455	4788.64	848.807
2007/08	28.33	1511.00	1.246	404.2	1.55252	163377.64	503.633
2008/09	36.18	1900.00	9.096	793.2	82.7372	629166.24	7214.95
Total	135.42	5534.00			502.706	1637834.8	23574.8

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{135.42}{5} = 27.08$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{5534.00}{5} = 1106.08$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} = \sqrt{\frac{x^2}{N}} = \sqrt{\frac{502.706}{5}} = 10.03$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{1637834.80}{5}} = 572.33$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{23574.80}{\sqrt{502.706}\sqrt{1637834.80}} = 0.82$$

Appendix 14F							
BANK: NBL							
YEAR	EPS (X)	MPS (Y)	x X(X Z $\overline{X}$)	y X(Y Z$\overline{Y}$)	x2	y2	xy
2004/05	105.49	1505.00	-11.88	-2288.8	141.134	5238605.4	27190.9
2005/06	129.21	2240.00	11.84	-1553.8	140.186	2414294.4	-18397
2006/07	137.08	5050.00	19.71	1256.2	388.484	1578038.4	24759.7
2007/08	108.31	5275.00	-9.06	1481.2	82.0836	2193953.4	-13420
2008/09	106.76	4899.00	-10.61	1105.2	112.572	1221467	-11726
Total	586.85	18969.00			864.46	12646359	8407.81

We have,

$Mean(\overline{X})$ X $\frac{X}{N}$ X $\frac{586.85}{5}$ *=117.37*

$Mean(\overline{Y})$ X $\frac{Y}{N}$ X $\frac{18969}{5}$ *= 1590.37*

$S\tan dard\ Deviation(X)$ X $\frac{\sqrt{(X\ Z\overline{X})^2}}{\sqrt{N}}$ X$\sqrt{\frac{x^2}{N}}$ X $\sqrt{\frac{864.46}{5}}$ *= 13.15*

$S\tan dard\ Deviation(Y)$ X $\frac{\sqrt{(Y\ Z\overline{Y})^2}}{\sqrt{N}}$ X$\sqrt{\frac{y^2}{N}}$ X $\sqrt{\frac{12646359.00}{5}}$ =

3793.80

Coefficient of Correlation = r (X,Y) = $\frac{\sum(X\ Z\overline{X})(Y\ Z\overline{Y})}{\sqrt{\sum(X\ Z\overline{X})^2}\sqrt{\sum(Y\ Z\overline{Y})^2}}$ X$\frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

X$\frac{8407.81}{\sqrt{864.46}\sqrt{12646359.00}}$ = 0.08

Appendix 14G							
BANK: KBL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \bar{X})$	$y = (Y - \bar{Y})$	x2	y2	xy
2004/05	17.58	369.00	-1.472	-300.4	2.16678	90240.16	442.189
2005/06	16.59	443.00	-2.462	-226.4	6.06144	51256.96	557.397
2006/07	22.70	830.00	3.648	160.6	13.3079	25792.36	585.869
2007/08	16.35	1005.00	-2.702	335.6	7.3008	112627.36	-906.79
2008/09	22.04	700.00	2.988	30.6	8.92814	936.36	91.4328
Total	95.26	3347.00			37.7651	280853.2	770.096

We have,

$$Mean(\bar{X}) = \frac{X}{N} = \frac{95.26}{5} = 19.05$$

$$Mean(\bar{Y}) = \frac{Y}{N} = \frac{3347}{5} = 669.40$$

$$Standard\ Deviation(X) = \frac{\sqrt{(X - \bar{X})^2}}{\sqrt{N}} \times \sqrt{\frac{x^2}{N}} = \sqrt{\frac{37.7651}{5}} = 2.75$$

$$Standard\ Deviation(Y) = \frac{\sqrt{(Y - \bar{Y})^2}}{\sqrt{N}} \times \sqrt{\frac{y^2}{N}} = \sqrt{\frac{280853.20}{5}} = 237.00$$

Coefficient of Correlation = $r(X,Y) = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2}\sqrt{\sum (Y - \bar{Y})^2}} = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$

$$= \frac{770.096}{\sqrt{37.7651}\sqrt{280853.20}} = 0.24$$

Appendix 14H							
BANK: SCBNL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \overline{X})$	$y = (Y - \overline{Y})$	x2	y2	xy
2004/05	143.14	2345.00	-2.512	-2627	6.31014	6901129	6599.02
2005/06	175.84	3775.00	30.188	-1197	911.315	1432809	-36135
2006/07	167.37	5900.00	21.718	928	471.672	861184	20154.3
2007/08	131.92	6830.00	-13.732	1858	188.568	3452164	-25514
2008/09	109.99	6010.00	-35.662	1038	1271.78	1077444	-37017
Total	728.26	24860.00			2849.64	13724730	-71913

We have,

$$Mean(\overline{X}) = \frac{\sum X}{N} = \frac{728.26}{5} = 145.65$$

$$Mean(\overline{Y}) = \frac{\sum Y}{N} = \frac{24860.00}{5} = 4972.00$$

$$Standard\ Deviation(X) = \frac{\sqrt{\sum (X - \overline{X})^2}}{\sqrt{N}} = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2849.64}{5}} = 23.87$$

$$Standard\ Deviation(Y) = \frac{\sqrt{\sum (Y - \overline{Y})^2}}{\sqrt{N}} = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{13724730.00}{5}} = 1656.79$$

Coefficient of Correlation = r (X,Y) = $\frac{\sum (X - \overline{X})(Y - \overline{Y})}{\sqrt{\sum (X - \overline{X})^2}\sqrt{\sum (Y - \overline{Y})^2}} = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}}$

$$= \frac{-71913.00}{\sqrt{2849.64}\sqrt{13724730}} = -0.36$$

Appendix 14I							
BANK: MBL							
YEAR	EPS (X)	MPS (Y)	$x = (X - \overline{X})$	$y = (Y - \overline{Y})$	x^2	y^2	xy
2004/05	15.43	256.00	3.056	-324.2	9.33914	105105.64	-990.76
2005/06	18.74	320.00	6.366	-260.2	40.526	67704.04	-1656.4
2006/07	9.02	620.00	-3.354	39.8	11.2493	1584.04	-133.49
2007/08	10.35	1285.00	-2.024	704.8	4.09658	496743.04	-1426.5
2008/09	8.33	420.00	-4.044	-160.2	16.3539	25664.04	647.849
Total	61.87	2901.00			81.5649	696800.8	-3559.3

We have,

$$Mean(\overline{X}) = \frac{\sum X}{N} = \frac{61.87}{5} = 12.37$$

$$Mean(\overline{Y}) = \frac{\sum Y}{N} = \frac{2901.00}{5} = 580.20$$

$$Standard\ Deviation(X) = \frac{\sqrt{\sum (X-\overline{X})^2}}{\sqrt{N}} = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{81.5649}{5}} = 4.04$$

$$Standard\ Deviation(Y) = \frac{\sqrt{\sum (Y-\overline{Y})^2}}{\sqrt{N}} = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{696800.80}{5}} = 373.31$$

Coefficient of Correlation = r (X,Y) = $\frac{\sum (X-\overline{X})(Y-\overline{Y})}{\sqrt{\sum (X-\overline{X})^2}\sqrt{\sum (Y-\overline{Y})^2}} = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}}$

$$= \frac{-3559.30}{\sqrt{81.5649}\sqrt{696800.80}} = -0.47$$