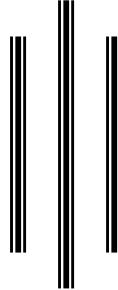


# **STOCK PRICE BEHAVIOUR OF NEPALESE COMMERCIAL BANKS**

**(With Special Reference to Everest Bank Limited, Himalayan Bank Limited,  
Laxmi Bank Limited, Nabil Bank Limited and Nepal Investment Bank Limited)**

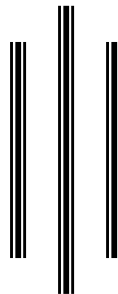


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**A Thesis Submitted To:  
The Office Of The Dean  
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Tribhuvan University**



***For the partial Fulfillment of the requirement for the  
Master's in Business Studies  
(MBS)***

March,2012



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## RECOMMENDATION

This is to certify that the thesis submitted by

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**(With Special Reference to Everest Bank Limited, Himalayn Bank Limited, Laxmi Bank Limited, Nabil Bank Limited, Nepal Investment Bank Limited)**

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## VIVA VOCE SHEET

We have conducted the viva voce examination of the thesis presented by

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Entitled

**Stock Price Behaviour of Nepalese Commercial Banks**

(With Special Reference to Everest Bank Limited, Himalayn Bank Limited, Laxmi Bank Limited, Nabil Bank Limited, Nepal Investment Bank Limited)

and found the thesis to be original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for Master's Degree in Business Studies (M.B.S.)

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## DECLARATION

I hereby declare that the thesis entitled "**Stock Price Behaviour of Nepalese Commercial Banks**" with special reference submitted to the Department of Management of Post Graduate Campus, Tribhuvan University, Biratnagar is my original work. It is completed for the fulfillment of the requirement of the Master of Business Studies (M.B.S) under supervision and guidance of Associate Prof. Dr. Shyam Bahadur Katuwal.

.....

Bharati Gautam

Researcher

Date: MARCH 2012

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## LIST OF ABBREVIATIONS

BV	Book Value
D/Y	Dividend Yield
DPR	Dividend Payout Ratio
DPS	Dividend per Share
E/Y	Earning Yield
EBL	Everest Bank Limited
EPS	Earning Per Share
F/Y	Fiscal Year
GDP	Gross Domestic Product
HBL	Himalayan Bank Limited
LB	Laxmi Bank
MPS	Market Value per Share
MV	Market Value
MV/BV Ratio	Market Value to Book Value Ratio
NABIL	Nabil Bank Limited
NIB	Nepal Investment Bank
NIDC	Nepal Industrial Development Corporation
NRB	Nepal Rastra Bank
NSM	Nepal Stock Market
P/E Multiple	Price Earning Multiple
ROA	Return on Assets
ROE	Return on Equity
T.U.	Tribhuvan University
NEPSE	Nepal Stock Exchange Limited

# **CHAPTER – I**

## **INTRODUCTION**

### **1.1 General Background**

Bank is an organization which deals in money and credit. Banking sector plays a vital role for the economic development of the country. It is a resource mobilizing institution which accepts deposits from various sources and invests such accumulated resources in the fields of agriculture, trade, commerce industry, tourism etc. The commercial banks have its own role and contribution towards economic development. R. S. Sayers defined a bank is an institution whose debts are widely accepted in settlement of other people's debts (cited by S, M. Shrestha, 2007, pp. 1). Moreover, Crowther mentioned the banker's business is to take the debt of other people to offer his own in exchange and thereby create money (Ibid). Bank can be a person, a company or a firm, with a place of business, and must be involved in credit creation.

Financial institutions constitute an important component of modern economic scenario. Their economic contribution lies in their role as intermediaries between ultimate savers, households, enterprises and government and the borrowing economic units in need of external finance. Financial intermediaries facilitate the transfer of funds from various sectors. Nowadays, modern banking institutions have been accepted as one of the most essential machinery to accelerate the pace of economic growth. The most important problem of developing countries is a slow rate of economic development. By economic development means the development of leading sectors of the economic like agriculture, industry, trade and commerce etc. The development of these sectors requires a regular supply of finance. Finance serves as energy for the economic development and commercial banks serve as reservoirs for supplying and controlling the stream of that fuel. Hence, importance and contribution of commercial banks as one of the important components of economic development of a country is immense. Hence, it is clear that the banks are extremely useful and indispensable for a modern community. In this context, even the developed countries have had their economic development with their strong base of banking system. It is thus evident that banks play an important role in the economic development of Nepal.

Common stock financing is a long-term source of financing of an organization. It is also known as equity. It is the first sources of fund in any type of organization like corporation, partnership etc. The equity capital is support for borrowing to expand the business and activities. Common stock holders will get the return from common stock.

Business enterprise requires tremendous amount of capital funds for smooth operation and regulation. Short term fund and long term capital funds are essential to grow and expand the organizational activities. Out of that, long term, funds are highly significant for future growth and prosperity of these areas. Most of the organizations generate these types of funds from financial market. Similarly, government also borrows large amount of funds to provide goods and services demanded from them by the people. The financial market permits both business and government to raise the needs funds by selling securities. Simultaneously, investors with excess funds are able to invest and earn in return enhancing their welfare.

Capital market is a market for long-term securities having maturities greater than one year. They are vital to long term and prosperity of economy since they provide the channel through which needed fund can be raised. It is mechanism through which public savings are channelized to industrial and business enterprises. The key instruments used in capital market are debt, preference stock and bond and convertible issues. Demand of capital in the capital market comes from agriculture, industries, trade and government, which sources are from individuals, corporate saving, multinational investors and surplus of government. The members of capital markets are stock exchange, specialized financial institutions, bank and Investment Company etc. The shares of the firms are traded among investors the transaction is said to have taken place in the secondary market.

Stock markets are very important economic institutions that play a crucial role in the economy by channeling investment where it is needed and can be put to best use. The stock markets work 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 the quality of their allocation to various investment projects is just as important a factor for growth. This is precisely what an efficient stock market does to the economy. Stock markets help agents manage liquidity and productivity risk by eliminating premature capital liquidation which increases firm productivity. Stock markets also accelerate growth indirectly by reducing liquidity risk which encourages firm investment. Hence, the principal roles that stock market can perform can be

stated as follows: First, stock market work as a vehicle for raising capital for firms. Second, capital markets in general, and stock markets in particular, can enable investors to diversify their wealth across a variety of assets, usually more easily than in most other financial markets. Thus capital markets reduce the risk that investors must bear, thereby reducing the risk premium demanded and the cost of capital. Third, stock market can perform a screening & monitoring role. Forth, stock markets and other financial intermediaries may function as complements, rather than substitutes, and a stock market that functions well may have positive externalities for the rest of the financial system.

The existence of highly developed, widely accessible, and smoothly functioning financial markets is of crucial significance in transmitting savings into the hands of those desiring to make investment expenditure. Those who can visualize and exploit potentially profitable investment opportunities are frequently not the same people who generate current savings. If the financial transmitting mechanism, such as stock markets, is inefficient, the flow of funds to business investment will be impeded, and the level of economic activities will fall below its potential. In liquid and more efficient stock markets investors assume low level of risk and therefore invest in the stock portfolio. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating long-term, more profitable investment, liquid markets improve the allocation of capital and enhance prospects for long-term economic growth. Further, by making investment less risky and more profitable, stock market liquidity can also lead to more investment . In this way long-term capital needs for productive investment are fulfilled and mobilization of such capital is essential for economic development. Stock markets assist in increasing capital formation through channelization of savings toward more productive sectors.

Instruments used in capital market are debt, stock, preferred stocks, bonds and convertible issues. Capital markets are also classified as primary market and secondary market. Stock market is a place where shares of listed companies are traded, transferred from one hand to another at a fair price through the organized brokerage system. Principally, stock market refers to the secondary market for the securities whereas primary market refers to the market for new issues. In the secondary market, to make transactions primary role to perform by the broker, in exchange they receive commissions. Stock market had been a global phenomenon in the present world regardless of the size of the economy of any particular nation. The primary role of the capital market is to allocate the economy's capital stock among various

firms and industries involving in trading, investment and production dimension. Due to globalization of economic market present world economy has been more competitive and complicated. Every sort of changes occurring in one sector of the world affects the others. Economic efficiency is simply impossible without a good system of allocating capital within the economy.

Without the secondary market primary would not function well. The existence of well functioning secondary market where investors come together to trade the exiting securities assures the purchasers of primary securities if the need arises. Thus, the primary and secondary markets are complementary, not competitive, to each other in the sense that one without other is incomplete. In summary, secondary markets are indispensable to the proper functioning of the economy.

The efficient financial markets are essential to ensure adequate capital formation and economic growth in an economy. It implies that market equilibrium and rational financial market are also essential for adequate development of financial markets, which is necessary for growth, and prosperity of economy. But the actual practice equilibrium is not found in the real world.

Mainly, financial market refers to money and capital market. Money market may be defined as short-term financial assets markets, which facilitates liquidity and marketability of securities. It is the market for short-term debt instrument having maturity to less than one year. Capital market plays a vital role in the national economy. It plays an important role in reinvigorating and boosting economic activities in a country. For mobilization of invisible resources, capital market is an important intermediary through the network of borrower and lender of funds within the economy.

Market price is the functions of various factors. These factors affect the market prices of a security. Thus, market prices fluctuate and it is not for a short period but for over a century. Many theories and models have been developed about the fluctuation and behavior of the behavior of securities prices.

## 1.2 Statement of the Problem

Bank represents a significant and influential sector of business world-wide. Most individuals and organization make use of banks either as depositors or borrowers. Bank plays a major role in maintaining confidence in the monetary system through their close relationship with regulatory, authorities and government and the regulation imposed on them by those governments. Hence, there is considerable and widespread interest in the well being of banks and in particular their solvency and liquidity and the relative degree of risk that attaches to the different types of their business.

Profit is one of the most important factors for financial performance. It is usually the result of sound business management, cost control, credit risk management and general efficiency of operation. Profit is essential for an enterprise for its survival and growth to maintain capital adequacy through profit retention. A bank must maintain adequate liquidity to meet a wide range of contingencies. If bank fails to maintain adequate liquidity it faces obvious difficulties. On the other hand if it maintains excess liquidity, it may be retained earnings to the point where it can be build up the capital needed to hold its relative position in the banking structure. Excess liquidity is the loss of income. A bank must maintain adequate cash and bank balance to meet day to day operations as well as for remote contingencies.

The user of the financial statement of the banks are interested in its liquidity and solvency and the risks related to the assets and liabilities recognized on its balance sheet and to its off balance sheet items. Liquidity refers to the availability of sufficient funds to meet deposit withdrawals and others financial commitment as they fall due. Solvency refers to the excess of assets over liabilities and hence to the adequacy of the banks' capital. A bank is exposed to liquidity risk and to risks arising from currency fluctuation, interest rate movement, changes in market prices from counterparty failure. This risk may be reflected in the financial statement, but users obtain a better understanding if management provides a commentary on the financial statements which describes the way it manages and controls the risks associated with the operation of the banks.

Today's context, most of the investors are attractive towards the banking sectors. Their must be comparative study among the different banks. If its remaining indifferent towards the other banks relevant information, in long-run it will give negative impact. Most of the customers, they are attractive towards such banks; who provides well and efficient service.

Similarly, investor invest their money those banks, who provide high dividend, high profit as well as high interest, customer needs pre-information about the ability of payment whereas they needed. If banks need to survive in competitive market for a long-run, it should be consider; liquidity position, profitability position, market position as well as other positions. Therefore, this study basically depends upon the financial position of Commercial Banks which are operating in Nepal. Which are beneficiary for customers as well as investors?

There are various studies on the Banking Sector's Financial Performance in Nepal, but no broad study have been done about Commercial Banks which are listed in security board of Nepal. This study basically concern to analyze the financial position of five Commercial Banks which are operated in Nepal.

The study attempts to explore in the following questions regarding the banks under study.

- ) How are the performance of the banks and the trend of stock price behavior?
- ) How the banks have been managing its liquidity position in relation to liquidity?
- ) Do the performance and the stock price behavior of the banks correlate?
- ) Whether the stock market is efficient or not?
- ) Do, the investors analyze the price trend, volume of stock traded while making investment?

### **1.3 Objectives of the Study**

The major objective of the study is to analyze share price behavior of the selected commercial banks in Nepal. The specific objectives of the study are:

- ) To analyze 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.
- ) To examine the relationship between market price per share and other determinant variables such as earning price per share and dividend per share.
- ) To understand how the price behaves in stock market and how investors can safeguard their investment on stock market.
- ) To study the growth of stock market.
- ) To point out the problems faced by banking sector in the stock market.

## **1.4 Significance of the Study**

The growth and drop in the price of stocks in stock market is very common phenomenon. People know that a particular stock is increasing or decreasing by given amount but does not know what the factors are behind these fluctuations. Few people, mostly broker and some interested groups known about the factors that determine the movement of stock price. In Nepal, earning capacity of the people is very low. Because of that they can hardly save money to invest in profitable sector. Mainly there are two approaches, fundamental and technical approach used to analyze the security's movement. Likewise Efficient market theory is also one of the best approaches to predict the successive price movements of stock. To be precise, this study will help to know to 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 helps the general public to know the different variables that affects the behavior of stock price in the market. This study also helps policy makers as there are 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.

## **1.5 Limitation of the Study**

This study is mainly concerned with some banks listed in the Nepal Stock Exchange Limited. So, this study might not represent the overall study of capital market. The data for the study is based on five-year transaction period.

1. Based on secondary data published by concerned companies and Nepal stock exchange.
2. It is also limited to analyze these problems that directly affect a stock price and also market. Thus, it does not consider the other factors they may cause stock price.

## 1.6 Organization of the Study

This study has been organized into five chapters, each devoted to some aspects of the study of stock price behavior of Nepalese Commercial Banks. Chapter one to five consists of introduction, review of literature, research methodology, presentation and analysis of data, and summary, conclusion and recommendations.

Introduction is the *first chapter* where subject matter is introduced, the problem is defined, objectives and the organization of the study have been presented.

The *second chapter* includes a discussion on the conceptual framework and review of the major empirical works as well as review of Nepalese studies. The related conceptual consideration and review of related literature conducted in this chapter provide a framework with the help of which this study has been accomplished.

The *third chapter* describe the research methodology explains all the methods of collection and analysis of data. It comprises research design, sample, nature and sources of data, data analysis technique, selection of enterprises and method of analysis.

*Chapter Four* is the main body part of the study that includes data presentation, interpretation and analysis. The chapter analyses the primary data collected from individual investors to adjudge their awareness on different aspects of stock market. The secondary data are analyzed the market price of stock with respect to dividend and earning in the Nepal Stock Market.

In the *last chapter* has been summarized and the study is concluded with major findings. The suggestion and recommendations to improve efficiency of the investors and stock market has been presented.

## **CHAPTER –II**

### **REVIEW OF LITERATURE**

#### **2.1 Introduction**

The literature review chapter gives an important discussion about the major debate on the topic. It reviews old thesis, dissertation, newspapers, magazine and suggestions of expert. Particularly, this chapter attempts to review the theory of stock price behaviour including fundamental analysis, technical analysis, efficient market theories. Financial institution and financial markets, capital market, economic liberalization and capital market development and review of major studies

#### **2.2 Conceptual Framework**

It is imperative to be acquainted with the general concepts of the share and other related matters and the general profiles of the banks under study before getting into the main subject matter of the share price behavior of the common stocks.

##### **2.2.1 Common Stocks**

Common stock represents the ownership of an organization, therefore common stock holder are the owner of the company. It is the residual claim in sense that creditors and preferred stockholders must be paid as schedule before common stockholders can receive any payments. Common stocks are generally "fully paid and non-assessable," meaning that common stockholders may lose their initial investment but not more. The great advantage of the corporate form of organization is the limited liability of its owners.

##### **2.2.2 Financial Institution and Marketers**

Most of the firm needs a lot of fund for operation. They can obtain funds from external sources in three ways. One is through a financial institution that accepts saving and transfers them to those that need funds. Another is through financial markets, organized forum in which the suppliers and demanders of various types of funds can make transactions. A third is through the private placement. Financial institutions serve as intermediaries by channeling the saving of individuals, business, and governments into loans or investments. Many

financial institutions accept customers saving deposits and lend money to other customers or to the firms; other invest customer's savings in earning assets such as real estate or stocks or bonds. Financial institutions are required by the government to operate within established regulatory guidelines. The key suppliers of funds to financial institutions and the demanders of funds from financial institutions are individuals, businesses, and governments. The major financial institutions are commercial banks, insurance companies, pension fund, mutual funds, etc.

Financial markets are forums in which suppliers of funds and demanders of funds can transact business directly. Whereas the loans and investments of institutions are made without the direct knowledge of the suppliers of funds, suppliers in the financial markets know where their funds are being lent or invest. Security markets are mechanism for channeling saving from savers to the ultimate investors who are interested to invest. They bring buyers and sellers of securities together and facilitate the flow of fund in the economy. The security markets are classified into: a) Money market and capital market, and; b) Primary market and secondary market.

Transaction in short term debt instruments or marketable securities i.e. all financial assets with a term to maturity of one year or less than one year are traded in the money market. The main function of the money market is to provide short term loans to the business, loans to the government and loans to household. Long term securities, bonds and stocks are traded in the capital market. All securities are initially issued in the primary market. This is the only market in which the corporate or government issuer is directly involved in the transaction and receives direct benefit from the issue. That is, the company actually receives the proceeds from the sale of securities. The issue of securities in the primary market leads to direct transfer of money from the savers to the issuer of the securities. The securities existing are bought and sold in the secondary market. In other words, financial market in which pre owned securities (those that are not new issue) are traded is called the secondary market. Its main functions are to provide liquidity to the owners of the securities.

### **2.2.3 Capital Market**

The capital market is a market that enables suppliers and demanders of long-term funds to make transactions. Included are securities issue of business and government. The backbone of

the capital market is formed by the various securities exchange that provides a forum for bond and stock transactions.

The key capital market securities are bonds (long-term debt) and both common and preferred stock (equity or ownership). Bonds are long-term debt instruments used by business and government to raise large sum of money, generally from a diverse group of lenders. Shares of common stock are units of ownership or equity in a corporation.

According to Securities Exchange Act 2040 (1983)-"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 Government of Nepal and it includes the securities issued under full guarantee of Government of Nepal by a notification published in Nepal Gazette or receipts relation to deposits of securities as well as right and interest relating to securities".

Accordance to the above definition, the following is the securities:

1. Shares, stock bond, debenture, debenture stock issued by a corporate body.
2. Negotiable certificates of deposits (which are issued by a depository institution).
3. Certificate of unit saving schemes issued by a corporate body.
4. Treasury bills and bonds issued by Government of Nepal.
5. Securities issued under full guarantee of Government of Nepal.

Thus capital market plays a vital role in the national economy. It plays a model role in boosting economic activities in the country. It is an organized institution where various securities are issued and traded for the purpose of collection and mobilization of private and institutional saving. Capital market also allows altering liquidity position, risk of their prospective portfolios in response to availability of information and marketability of securities.

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. 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.

By improving liquidity, stock market provides continuous market that makes more frequent but small price changes. Market price of stock is determined by the interaction of demand and supply. Contrary on such stock at a given time price and volume, the past transactions are meaningful indication of problem in relationship to 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.

The primary markets are absolutely vital to capitalist economy. Without secondary market, primary market would not function well. 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 institutions 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 institution are functioning by reselling the securities through exchange process.

In Nepal, Nepal Stock Exchange (NEPSE) 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 facilitation transactions in its trading floor through members, market intermediaries such as brokers, market makers, etc. Government of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

## **2.3 Theories of Stock Price Behavior**

Today, most of the developing countries are boosting their economic development through the contribution of the investment sector. 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. Business cycle theories felt that tracing the evolution of several economic variables over time would clarify and predict the progress of the economy through boom periods.

There are two theories of stock price behavior i.e. classical approach and efficient market theory approach. Classical or conventional approach includes fundamental analysis theory and technical analysis theory. Under efficient market theory, there are three forms of efficient market hypothesis. Classical approach assumes market as inefficient whereas the efficient market theory assumes that market is efficient. Prior to the development of the efficient market theory, investors were generally divided in to two groups, fundamental and technical.

### **2.3.1 Convention or Classical Approach**

The conventional or classical approach includes fundamental analysis and technical analysis theories. One of the major divisions in the ranks of financial analysis is between those using fundamental analysis (known as fundamental analysts or fundamental) and those using technical analysis (known as technical analyst or technicians).

#### **2.3.1.1 Fundamental Analysis**

In the fundamental approach, the security analyst or prospective investors are primarily interested in analyzing factors such as economic influences, industry factors and related company information such as product demand, earnings dividends and management in order to calculate an intrinsic value for the firm's securities. Fundamental analysis begins with the assertion that the true value of any financial asset equals the present value of all cash flows. The owner of the asset expects to forecast the timing and size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate. The fundamentalist makes a judgment of stocks value with risk return framework based upon earning power and the economic environment.

The fundamentalists are of the opinion that the value of shares depends upon the anticipated future stream of returns and corresponding capitalization rates. The capitalization rate is an appropriated risk related cost of equity. Therefore, value of share, under this model, is equal to the present value of future incomes from an equity discounted at risk adjusted capitalization factor. It requires full disclosure of financial and economic information. If the dissemination of information is not regular, reliable and complete, the market value of shares cannot be properly ascertained. The actual price of the security is considered to be a function of set of anticipation. Price changes as anticipation change which in turn changes as result of new information. The market price of share is based on its intrinsic values.

The objective of fundamental analysis is to appraise the intrinsic value of the security. The intrinsic value is the true economic worth of the financial assets. It is sometimes said fundamental analysis is designed to answer to questions 'what?' The shareholders would like to maximize the return by buying the shares of the undervalued 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.

#### **2.3.1.2 Technical Analysis**

The technical analysis theory of share price behavior is based on past stock market information in an attempt to predict future price movements. This theory includes the study of the past price and value data of stocks to forecast future price movement. Past prices are examined to identify recurring trends or patterns in price movements. Then more recent stock prices are analyzed to identify emerging trends or patterns that are similar to past ones. This analysis is done in the belief that these trends or patterns repeat themselves. "A highly specialized form of market is practiced by technical analyst.

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. In this method, technical analyst thinks little about future earnings and dividend. The analyst usually attempts to predict short-term price movements and thus makes recommendations concerning the

timing of purchases and sales of either specific stocks or groups of stocks or stock in general. It is sometimes assumed that technical analysis is designed to answer the questions 'when'.

Some basic assumptions of technical analysis theory are as follows:

1. Market value is determined by interaction of demand and supply.
2. Demand and supply are governed by numerous factors, both rational and irrational.
3. Security prices tend to move in trends that persist for an appreciable length of time despite minor fluctuations in the market.
4. Changes in trends are caused by shifts in demand and supply.
5. Shift in supply and demand, no matter why they occur, can be detected sooner or later in charts of market transactions.
6. The pattern tends to repeat itself.

Technical analysis believes that past patterns of market action will recur in the future and can therefore be used for predictive purchase. For which it indulges in the study of past market behavior with reference to various financial and economic variables to forecast the future. Financial and economic variables do change, but these variables are to be adjusted in the light of present situation.

Stock price always move in trend because of an imbalance between supply and demand, when the supply of stock is greater than the demand, the trend will be down as there are more seller than buyers. When demand exceeds supply, the trend will be up and the "buyer bid" up the price and if demand and supply are merely equal, the market will move sideways in what is called a "trading range".

### **2.3.2 Efficient Market Theory**

An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently except by luck. In an efficient capital market, current market prices fully reflect available information. The role of markets in a competitive economy is to allocate scarce resources between competing ends in a way that leads to the scarce resources being used most productively. This means that the highest bidder for the

resources gets to use to them. The role of capital or securities market is to allocate investible resources.

"An Efficient Market (EM) is defined as one in which the price of security fully reflects all known information quickly and accurately" John-1990-425. An efficient market is one where a security's current price gives the best estimate of its true value. In an efficient market, there are higher free lunches non-expensive dinner. It is not possible to systematically gain or loss profits from trading on the available public information. Generally, markets are said to be efficient when: i) price adjust rapidly to new information; ii) there is a continuous market in which each successive trade is made at a price close to the previous price (the faster that the price changes, the more efficient the market); iii) the market absorb large amount of securities without destabilizing the prices.

Market efficiency is the most profound idea to affect the investment decision process in security markets, mainly in equity markets. Market efficiency may be defined in different context of areas, for instance, organizational efficiency, investment efficiency, allocation efficiency, informational efficiency, operation efficiency, etc. 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. If market price of share are deviated from justified economic values, as rational investors of efficient security market, he tries to adjust the estimated economic values according to new information arises in an efficient market price. Thus, securities are efficiently priced on a continuous basis. EMI, which has a significant implication for investors in stock market, would directly affect the investment process and investment decision.

An efficient market is defined as a market where there are large numbers of rational investor's profit maximizes actively competing with each trying to predict future market values of individual securities and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to situation where at any point in time actual prices of individual securities already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value.

Efficient market is large number of knowledgeable and profit maximizing independent buyers and sellers, new information is generated randomly and investors adjust the information rapidly. The degree of market efficiency has important implication for the economy and for investment decision makers. In an economic sense, it is important that security prices provide accurate signals that can be used to allocate capital resources correctly. Incorrectly prices securities would result in incorrect allocation of capital.

The 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 allocation, operational efficiency etc. allocation 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.

The requirements for a security market to be efficient are as follows:

1. 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.
2. Price must be efficient so that new inventions and better products will cause a firm's securities price to rise and cause investors to want to supply capital to the firm.(i.e. buy its stock)
3. Information is costless and widely available to market participants at approximately the same time.
4. Information is generated in a random fashion such that announcements are basically independents of one another.
5. Transportations cost such as sales commissions on securities are ignored.
6. Investors must be rational and able to recognized efficient assets so that they will want to invest money where it is needed most i.e. in the assets with relatively high returns (Bhalla, 1983:216).

The above conditions are met 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 in 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. 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 efficient capital markets.

At the conclusion, it can be said "In an efficient market there are neither free lunches nor expensive dinners. It is not possible to systematically gain or lose abnormal profits from trading on the basis of available information. Efficient market theories believe that someone do better than average because of luck. In fact, they suggest that the investors who buy and sell their stocks frequently do less well than the stock market averages by an amount equal to the commissions they pay.

“An efficient capital market is one in which it is impossible to earn an abnormal return by trading on the basis of publicly available information” Stewart L Brown 1978. The main assumptions of market efficiency are:

- a) All investors have costless access to currently available information about the future.
- b) All investors are good analyst.
- c) All investors pay close attention to market process and adjust their holdings appropriately.

There are three forms of efficient market hypothesis based in type of information used in making market decision:

- 1) Weak-form market efficiency
- 2) Semi-strong form market efficiency
- 3) Strong -form market efficiency

1) **Weak -form market efficiency:** The stock prices are assumed to reflect all past information about the price movements in the weak form of efficiency. This hypothesis

holds that no investor can earn excess returns by developing trading rules based in historical prices or return information. The significant conclusion derived from the weak form hypothesis is that past rates of return and any other security market information should have no relationship with future stock prices or future rates of return. It is 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.

To know that the capital market is efficient in its weak form, we can find out the correlation between the 'security prices over time'. In an efficient capital market, there should not exist a significant correlation between the security prices over time (Fama, 1965:55-59). Most empirical test has shown that there exists serial independence between the security prices over time. An alternative method of testing the weakly efficient market hypothesis is to formulate the trading strategies using the security prices and compare their performance with the stock market performance. The capital market will be inefficient if the investor's trading strategy could beat the market. Researchers have studied a large number of trading rules, and have concluded that it is not possible for investors to outperform the market.

2) **Semi-Strong form of efficiency:** In the semi-strong form of efficiency, the security prices reflect all publicly available information. This implies that no investors could earn excess return using publicly available resources such as corporate annual reports, stock market price information or all publicly available data such as earnings, dividends, stock split announcements, new products development, financing difficulties, accounting changes, or financial dailies/magazines (e.g. The Economic Times). In fact such publicly available information is already impounded in the current security prices. If the semi-strong hypothesis is true, then only a few than what could be earned by using a native buy and hold strategy. This form of efficiency is most controversial because it implies that a security analyst who tries to identify mispriced using publicly available information is wasting time because that information is already reflected in the current price. 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 the market using such information.

3) **Strong form of efficiency**: In the strong form of efficiency, the security prices reflect all published and unpublished public and private information. The strong form encompasses both the weak form and the semi strong form. This version implies that no opportunities should exist for any investors to derive above average rates of return. The most stringent form of market efficiency is the strong form which asserts that prices fully reflect all information public and non public. An obvious way to check the validity of the strong efficient market hypothesis is to examine the profitability of traders in securities made by insiders to see if the insider's access to information allows them to earn statistically significant trading profits.

### **2.3.2.1 Random Walk Efficient Market Theory**

The random walk theory assumes that all future stream of income from the equity investment are independent of preceding income. In other words, future prices cannot be predicted on the basis of past price behavior. It means that we attempt to predict future prices in absolute terms using only historical price change information, we will not be successful i.e. successive price changes at any time will on the average reflect the intrinsic value of the security. The random walk theory says that nothing more than that successive price changes are independent. This independence implies that prices at any time will on the average reflect the intrinsic value of the security. If a stock price deviates from its intrinsic value because of different insights into future prospects of the firm, professional investors and smart non professionals will seize upon the short term or random deviations from the intrinsic value and their active buying and selling of the stock in question will force the price back to its equilibrium position. In other words, 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 correlated 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. Though the subject of market efficiency has been much concerned area of the study for the academicians and researchers in recent times, the advocates of the efficient market theory are matched by an equally eloquent opposing camp, which argues that the stock market is neither competitive nor efficient. The critics contend

that one or more of the following factors cast their shadow over the efficiency and competitiveness of the stock market.

## **2.4 Economic Liberalization and Capital Market Development**

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 on 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 on 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 strengthens the financial sector by implementing various prudential financial norms like income recognition, loan classification, maintenance of adequate loan loss provisions, reserves and capital adequacy rational 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 organization.

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 banks 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 1992 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 principle 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 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 Implication on Capital Market Development**

It was realized after the restoration of municipality democracy in the country 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 the policy of privatization of industrial and commercial undertaking retaining the public unity 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. 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 has issue bonds worth Rs. 4 billion. This squeeze in excessive liquidity has been helpful in easing the domestic inflation NRB continued to issue bonds occasionally to absorb excessive liquidity.

## **2.6 Review of Empirical Studies**

In the following sections it is tried to review various international as well as Nepalese journals and books regarding the capital and stock market.

### **2.6.1 Review of Foreign Studies**

Various number of research studies have been performed internationally on the stock market. Research on security price did begin with the development of a theory of price formation

which was then subjected to empirical tests. The impetus for the development of theory came from the accumulation of evidence in the middle 1950s and early 1960s that the behavior of common stock and other speculative prices could be well approximated by a random walk.

In 1927, Slutsky proved that the randomly generated price changes look like stock price changes and they appear to exhibit cycles and other patterns. Alfred Cowles in 1933 found little evidence that stock market analysis could predict future price. Alfred Cowles and Herbert E. Jones in 1937 reported that stock prices moved with predictable trends. They gave a controversy to the random walk model as a valid share price behaviors model in USA. This finding remained a challenge against the random walk hypothesis more than two decades.

In the middle 1950 that the behavior of common stock and other speculator of prices could be well approximated by a random walk. Much of the theory on the random walk can traced on French mathematician Louis Bachelier whose PhD dissertation was title “the theory of speculation” researcher tested the model in commodity speculation in France was a “fair game.” researcher concluded that the current price of a commodity walk was unbiased estimate of its future price. After the first discovery of the random walk model by Louis Bachelier, empirical testing of the model in the stock prices almost remained stagnate until 1960;s. there were large number of studies most of which were briefly review below.

In 1965, Samuelson though lacked theoretical discussions in his paper, but his findings support the independent hypothesis of random walk theory in stock prices. In conclusion, he states that if a market has zero transaction costs and if all available information are free to all interested parties and if all market participants either potential and existing have the same time horizons and expectations about prices, the market will be efficient and prices will fluctuate randomly.

Kendall (1953), Roberts (1959) and Osbern (1959) also tested the model that gave support to the theory. Then after in 1960’s and onwards numerous studies were carried out in this area validated the hypotheses while some other studies refuted this theory as a true description of the market. This research applies various analyzing tools and mechanical rules, details of that have been present in the following paragraphs.

Kendall made significant contribution to advance in the study of the random walk model. Researcher tested the model on the weekly price changes of the 19 indices of British

industrial shares and in the spot price series of cotton (New York) and wheat (Chicago). Researcher was analyzes the data by serial correlation coefficient and concluded that the subsequent stock price movement follows random walk. Researcher showed that the successive price changes are statically independent to its past price changes.

Roberts conducted simulation tests by comparing the cumulating of random numbers and the Dow- Jones Industrial Average Index (DJIAI) for about one year. Researcher observables the first difference of two series produce the same pattern. Researcher gives a number of methodological suggestions for testing what he calls the change model. Researcher suggested run analysis for testing independence of price change s. similarly, Osbern (1959) analyzed stock price from New York stock exchange (NYSE) using daily log price changes, which called Borwain Motion. Research found the consistency between the Borwain Motion and share prices movements rise to support on random walk hypothesis.

Counter had analyzed weekly and 14-week interval data on 14 stocks from New York Stock Exchange (NYSE). Research found that one-week interval stock price moves as a random walk and some dependencies in the data at 14 weeks interval. The average serial correlation coefficient for one week as -0.047 and for 14 was 0.131. Researcher focused the importance of “differencing interval” while testing for randomness in stock price behavior.

In 1965, Fama analyzed the movement of stock market price changes of all the stocks that make up Dow Jones Industrial Index for the period end of 1952-1962 and investigated the daily proportional price changes of those 30 industrial stocks and auto correlation were estimated for a variety of lags ranges from 1 to 10 days. In his study, he found that the auto correlation coefficients for daily changes are small, the average being 1.03 i.e. near to zero. Out of thirty, eleven auto correlation coefficient were significant different from zero and lagged price changes show some degree of dependence. He further analyzed the data by run tests by total number of run number of runs by signs and distribution of runs by length. He found slight tendency for this to occur but again the results were sufficient to accept the random walk hypothesis.

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 .

The investment decision in the stock market, *ceteris Paribus* 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.

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.

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.

Hence, on the basis of the reviews done above of the previous studies, it can be concluded, that the stock market prices show a random movement and the security price appears to be serially independent.

## **2.6.2 Review of Nepalese Studies**

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 of the available relevant studies are reviewed below. Even though these studies were carried out few years back, it can provide intellectual ground in our domestic stock market and its dimension in the present context.

Here, we are taking brief synopsis of Stock market Behavior in a Small Capital Market by Pradhan R.S in 1993, Shareholder's Democracy and Annual General Meeting Feedback by Professor Dr. Shrestha and The Dividend Policy and Value of Firm in Small Stock Market conducted by Dr. Kamal Das Manandhar in 1998.

The study about stock market behavior in a small capital market in Nepalese context was conducted by Dr. Radheshyam Pradhan in 1993 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. To find out the above objective, this study is based on cross sectional analysis of 55 observations and According to him, this paper is based pooled cross section analysis of 55 observations. Data could not be obtained on contacting the individual enterprise as they traded them confidential.

Due to initial stage of stock market, there is no system yet to compile and publish stock market data on regular basis. There is no database, which make it difficult to carry on any research in Nepalese stock market. Considering the study period of 1986 to 1990, usable data could be obtained for 17 enterprises (Pradhan, 1993: 216). These enterprises are in different sectors such as manufacturing, banking, trading, hotels, etc. In this study, he constructed three different levels of portfolios of sample securities (small, intermediate and large). According to market equity, market value to book value, price earnings and dividend per share to market price per share, dividend per share to earning per share and analyze liquidity, leverage, earnings and coverage of each portfolio in terms of large and smaller and also average ratios are computed.

He concludes "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; whereas 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 that 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. However there are more variable for assets with smaller price earning ratio. Stock paying higher dividends has higher liquidity, low leverage, high earnings, and high turnover and high interest coverage whereas liquidity and leverage ratio are more variable for the stock paying lower dividends (Pradhan, 1993: 216).

The study of Shareholder's Democracy and Annual General Meeting Feedback conducted by Professor Dr. Shrestha critically analyzed the situation of common stock investors and the situation is more or less similar till now. He further emphasizes the need of separate act regarding the protection of shareholder' right in the current context of increasing number of shareholders. Some public limited companies have floated the shares to the general public without having shareholder's representation in the board. There are many such companies which conduct the annual general meeting just to fulfill their desire and do not consider the voice of the majority of the shareholders. Similarly, management involvement and government intervention in the board election have brought a greater set back in the voting right of the shareholders (Shrestha, 1995:45). The encouraging and growing disclosed contents of prospectus. This helps to satisfy a minimum standard of faith on investment in shares through relying on pros and cons of prospectus. It is therefore important to disclose everything in prospectus which could reasonably influence the mind of the prudent investors. Dr. Shrestha in this context further emphasizes need of the expression of disclosure philosophy and investigation of frauds in prospectus reconciliation to check growing problems in the development of the capital market in Nepal.

Most of the studies on share price behavior are conducted by different scholars in the context of Nepal at the secondary market through different point of view. They organized the study using different approaches and tools so as to analyze the behavior of stock price more realistically at the specific point of time. This nature of stock prevails more or less similar both abroad and in Nepalese market. The study of market regarding the secondary market in Nepal is very few because the capital market started to develop lately and hence does not have very long history to look for. It still is in the process of development. The result of the study differs depending upon the factors like sample size and methodology used during the study. The earlier studies were based on randomly selected sample stocks while this study is based on fully paid up and actively traded equity shares related to each commercial bank taken into consideration. Moreover, the earlier studies were conducted when the organized stock market was at the initial stage without considering necessary information while this present study is based on the information almost fourteen years after establishment of NEPSE which undoubtedly portrays the real scenario of the stock market on present context. Previous researches have been conducted to identify share price behavior by using limited tools i.e. run tests, serial correlation, risk and return analysis, etc. in particular company's share. This study uses some of the methods used previously and in addition, broadens its area of study by

analyzing share price behavior on the basis of important indicators like EPS, DPS, P/E ratio, dividend yield, earning yield, MV/BV ratio, current ratio, ROE etc. which plays significant role in determining share price and its behavior. Furthermore, this study has used commercial banks that are enlisted as the ones with high trading value and high frequency of trading in the security market which helps additionally to identify the price behavior of commercial banks as a whole. To make study even more accurate the monthly data has been taken within the span of recent five years i.e. from 2061/062 to 2067/068 (2005/06 to 2009/10 AD). Most of the previous studies in Nepalese context are done in the pursuit of academic fulfillment with little help to the professional community and probable investors in the capital market. Hence, this study tries to fill that shortcoming by trying to give certain professional opinion in order to do some contribution in practical side of capital security market and side by side carrying its academic purpose by revalidating the tools and techniques available in the field of analysis of share price behavior. Thus, this study enables to view current condition of share price behavior by updating and revalidation in terms of the changes taken place in stock market of Nepal.

Bhattarai carried out a study impact of securities exchange centre on capital mobilization with special reference to the government securities and share market in Nepal. The objective of the study was to evaluate the significant features of government securities make to fine out the contribution of securities exchange centre. Researcher concluded that securities exchange centre has mobilized long term capital required to the new companies lunch the development activities in the country to provided the investment opportunities to investor though the primary market.

Bhatta carried out a study on assessment of the performance of listed companies on Nepal. The basic objectives of this study were performance of listed companies. He has taken 10 listed companies as sample based on secondary data. By using different statistical tools like ratio analysis, beta coefficient and portfolios to analyses the dividend yield, liquidity, leverage risk and return etc. Researcher concluded that capital market to run efficient required continues flow of information and there was serious deficiency of such information in market. Investors were depressed in the market by rules, regulations, and bureaucratic set up of the companies.

Bhatta carried out a study on dynamic of stock in Nepal. The primary objective of the study was to analyze trend research study and to analyze the market share price of secondary

market. By using differential statistical tools like mean, standard deviation and other essential tools for the study purpose of 14 companies listed in stock market could be regarded as the heart of the capital market. There is a high volatility of share price.

Pradhan conducted a study on stock market behavior in a small capital market. Different financial tools were used in the study period of 1986 to 1990. The sample for study was taken from seven listed companies. The main objective of the study was the stock market behavior in a small capital market in the context of Nepal. Researcher concluded that the larger stock have larger price earnings ratio, larger ratio of market value to book value of equity, lower liquidity, lower profitability and smaller dividend. Larger stock also had higher leverage, lower assets turnover and lower interest coverage but these were more variable for smaller stock than for leverage, lower turnover, lower profitability and lower interest coverage's.

Pradhan and Upadhaya conducted a study on the efficient market hypotheses and the behavior of the share prices in Nepal. The objective of the study was to make comprehensive investigation of weak and other form of efficient market hypotheses. Different statistical tools were used in the study serial correlation, the run test, weighted mean, median, chi-square test, and Spear's rank correlation. Twenty-three equity shares listed and activity traded in the Nepal stock exchange Ltd. The researcher concluded that Nepalese stock market might not be termed historical information was reflecting in security price. The main factors affecting share prices perceived by the respondents were dividends, retained earnings, bond share, and right issue. The study also found more volatile than expected dividends. The study also found that the shareholders in high bracket did not prefer retained earnings instead of dividend.

Poudyal conducted study on share price behavior of listed companies in Nepal. The study was conducted with the objective to test the daily share price behavior of listed companies in Nepal. The sample for the study comprised of 21 companies representing from each sector listed in Nepal stock exchange. This study was based on the secondary data. Different statistical tools like serial correlation and run test were used. Researcher concluded that NEPSE index showed a steady increase in the later month of the study period, which also shows the better performance of NEPSE. Stock market performance was more or less market performance was steadily increasing with the increase in the number of listed companies. The badly affected sectors were hotels, trading, manufacturing, & processing sector due to different reasons. The NEPSE index showed a better performance during the study period. NEPSE index of commercial banks was in increasing trend as compared to the other sectors.

Manandhar (2002) carried out a study on impact of bonus share issue on stock price behavior. The study included the observation of 21-bonus share issue of 11 companies covering the period from 1993/94 to 1997/98. The important implication of this result corporate firm was that firm's share price could maximize if it announces the bonus ratio to the maximum of 1:1.

## **CHAPTER –III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals with methodology that is used in the period of research and also brief introduction to financial parameters used in this study. Research design, sources and nature of data, sampling method, and statistical and financial tools for data analysis are basically explained in this chapter.

#### **3.2 Research Design**

The research design includes specification of the method of the proposed 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 2005/06 to 2009/10.

#### **3.3 Population and Sample**

There are various sectors in the stock market such as commercial banks, insurance, finance, hotels, trading, manufacturing and processing and others. This study includes only the commercial banks. The data used for the purpose of the study are based on the banks that are listed in the stock market. Among the listed banks, 5 banks are taken as sample to represent the performance of the capital market.

The sample banks are as follows:

1. Laxmi Bank limited
2. Nepal Investment Bank Limited
3. NABIL Bank Limited
4. Himalayan Bank Limited
5. Everest Bank Limited

### **3.4 Nature and Sources of Data Collection**

The necessary information and data are collected from different sources. This study is primarily based on the secondary data. The data are taken from the annual report, trading report and official record of stock exchange and the annual reports of the specific banks as well as internet website (www.nepalstock.com). Other data from to NRB, ministry of finance, national and international journals, sample banks are reviewed through concerned website. Primary data have also been used where secondary sources are inadequate. The method of collecting data is primary and secondary. They are:

#### Primary Data:

- Personal observation
- Questionnaire analysis
- Interview with brokers and investors
- Informal talk

#### Secondary Data:

- Annual report of the banks
- Previous study and reports
- Published as well as unpublished documents

### **3.5 Data Analysis Technique**

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, Like mean, correlation coefficient have been used to analyze and interpret the relevant data so that meaningful conclusions can be drawn.

#### **3.5.1 Statistical Tools**

Statistical tools such as arithmetic mean, coefficient of correlation are the main tools applied in this study. Other statistical tools are also applied where necessary.

### 3.5.1.1 Mean

Mean or arithmetic average of a series is the figure obtained by dividing the total values of the various items by their number. In general if  $X_1, X_2, \dots, X_n$  are the given 'N' observations then their mean, usually denoted by  $\bar{X}$  is given by:

$$\bar{X} = \frac{\sum X}{N}$$

### 3.5.1.2 Correlation Coefficient

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:

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

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

- ) 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.
- ) 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  $r$  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.

### 3.5.1.3 Regression Analysis

#### Simple Regression Analysis

Simple regression analysis consisting one dependent variable Y as Performing MPS and independent variables X as EPS and DPS. This regression is done to find out the degree and the direction between MPS and EPS and DPS respectively.

The regression equation for simple regression is:

$$Y = a + b X$$

Where,

Y= dependent variable

X= independent variable

a = y-intercept [the value of dependent variable performing MPS when independent variable EPS and DPS

b = slope [the rate of change in dependent variable Y(MPS) due to per unit change in independent variable X (EPS and DPS). It measures the rate of relationship.

#### Multiple Regression Analysis

Multiple regression analysis consist of one dependent and two or more than two independent variables. In this analysis there are only two independent variables (EPS and DPS) and one dependent variable i.e MPS.

The regression equation of Y (MPS) on  $X_1$  (EPS) and  $X_2$  (DPS) is:

$$Y = a + b_1 X_1 + b_2 X_2$$

Where,

Y= MPS

$X_1$ = EPS

$X_2$ = DPS

$b_1$ = Beta coefficient of EPS

$b_2$ = Beta coefficient of DPS

### 3.5.2 Financial Parameter

The financial parameter helps to measure the financial status of the organization. The parameter is found from financial statement and financial disclosure. Some of the financial variables, stated below, have been employed to analyze market capitalization, market price of share, earnings price per share and dividend per share.

### 3.5.2.1 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 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,

$$\text{EPS} = \frac{\text{Net profit available to equity holders}}{\text{No. of stocks outstanding}}$$

### 3.5.2.2 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 dividend by the number of ordinary shares outstanding. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend available to ordinary shareholders}}{\text{No. of stocks outstanding}}$$

### 3.5.2.3 Price Earning Multiple

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.

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

### **3.5.2.4 Dividend Yield**

Dividend yield shows the relationship between dividend per share and market price per share. The dividend yield is calculated by dividing the cash dividend per share by the market value per share.

$$\text{Dividend Yield} = \frac{\text{Dividend per Share}}{\text{Market Value per Share}}$$

### **3.5.2.5 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.

$$\text{Earning Yield} = \frac{\text{Earning per Share}}{\text{Market Value per Share}}$$

### **3.5.2.6 Market Value to Book Value Ratio**

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

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

### **3.5.2.7 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 obligation and reflect the short-term financial strength of the firm. Thus current ratio has been used to measure liquidity.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

### **3.5.2.8 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.

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Tax}}{\text{Total Assets}}$$

### **3.5.2.9 Return on Common Equity**

The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher these returns, the better off are the owners.

Return on common equity is calculated as follows;

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

## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Introduction**

This chapter is the main body of the study. Detailed data collected from both primary and secondary sources are presented and analyzed. On the background of literature review and research methodology as outlined in the preceding chapter, it is tried to analyze and diagnose the movement of returns and prices of securities and investors' responses regarding their investment decision. This study is largely based on the primary data. First the investors' responses regarding various aspect of investment are analyzed to judge their awareness and than the secondary data are analyzed to examine the risk and return on common stock of selected companies.

#### **Empirical Results**

If it is assumed that the simple proportions of positive, negative and zero price changes are good estimates of the population, then the hypothesis of independence can be testes by using the equation. The calculated value of standard normal variant  $Z$  for each sample bank is presented.

It is important to test absolute dependence in the price changes than whether the dependence is positive or negative. To test the randomness or independence of the given share prices, the values of the standard normal variant  $Z$  as calculated at the 1% level of significant.

Table 4.1 shows name of the companies having significant value of standard normal variate  $Z$  at 1% level of significance.

**Table - 4.1: Significant value of standard normal variate z**

S.No.	Name of the companies	Level of the significance	
			1%
1.	Laxmi Bank Limited		R
2.	Nepal Investment Bank Limited		R
3.	Nabil Bank Limited		R
4.	Himalayan Bank Limited		R
5.	Everest Bank Limited		R

**Note:** R indicates that the hypothesis of randomness or independence is rejected. Viewed from Table 4.1 which gives information regarding the composition of standardized variable, it can be seen that the standard normal variant Z is significant 1% level of significance in respect to all sample banks.

The overall results suggest that the hypothesis of randomness of share prices do not support the monthly closing stock of NEPSE. Hence, it can be concluded that these companies do not follow random walk model or weakly efficient market hypothesis. It suggests that the Nepalese stock market may not be defined as “weakly efficient” in pricing the shares as the implication of non-random behavior in share prices. In view of above findings, the technical analysis theory can be useful to an extent as an investment strategy for buying selling shares in such market situation. The result obtained also suggests that the fundamental or intrinsic value analysis is important to test the efficiency of NEPSE.

## **4.2 State and Growth of Stock Market**

The history of stock market began with the floatation of shares by Biratnagar Jute Mill and Nepal Bank Limited in 1937, other development relating capital market were the introduction of the company act, in 1951. 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 Centre was changed to Security Exchange Centre 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 prices Securities Exchange Centre 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 Centre 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 county, 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.

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 13<sup>th</sup> 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.

The Table presented below shows the key development stage of stock market in recent time:

**Table - 4.2: The Development of Stock Market in Nepal***(in million)*

<b>Descriptions</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
Paid up value of listed shares (Rs)	19958	21746	29465	61140	79356
Market Capitalization (Rs.)	96763.70	186301.3	366247.6	512939.07	316871.37
No. of Company Listed	135	135	142	159	176
No. of Company Traded	110	116	136	170	198
No. of Shared Traded	12221.90	18147.30	28599.80	30547.16	26231.35
Turnover (Rs.)	3451.43	8360.07	22820.8	21681.23	11851.22
% of turnover to market Capitalizati	3.57	4.49	6.23	4.22	3.14
%of turnover to paid up value	17.29	38.44	77.45	35.46	14.93
Market Days	228	232	235	234	225

Sources: [www.nepalstock.com](http://www.nepalstock.com)

The above Table clearly shows the main indicators of stock market are in fluctuating trend in recent year. The paid- up value of listed shares was Rs.19958 million in the year 2005/06, which is in the increasing trend and was 79356 million in 2009/10. In the year 2005/06, the turnover is Rs.3451.43 million which increases the following year to Rs.8360.07 million. With continuous fluctuation in the following years, it reaches to Rs. 11851.22 million in the year 2009/10. The number of listed company is in increasing trend. It was 135 in 2005/06 and it became 176 in 2009/10. The number of share traded in the floor was increased sharply from 12221.90 in the year 2005/06 to 18147.30 in the year 2006/07 but decreased to 26231.35 in the year 2009/10.

The market was in the fluctuating manner over the period of study. due to international and national reasons. The world economy was going through the recession phase that made severe affect on world stock market and Nepalese stock market was no exception. The increasing level of internal conflict and political instability was badly hampering the stock market and economy as a whole.

### 4.3 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 stock, 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, and dividend payout ratio, market price to book value ratio, dividend yield, earning yield, liquidity ratio, return on assets and return on equity.

#### 4.3.1 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 ordinary shareholders are represented by net profits after taxes and preference dividends. EPS is closely watched by the investing by the investing public and is considered an important indicator of corporate success. Thus,

$$\text{EPS} = \frac{\text{Net profit available to equity holders}}{\text{No. of stocks outstanding}}$$

**Table - 4.3: EPS of the sample banks (in RS.)**

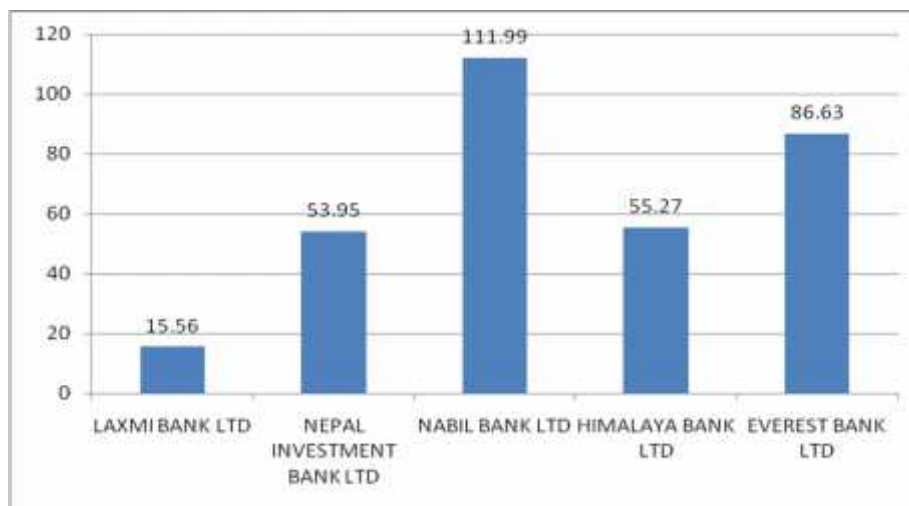
<b>Banks \ Years</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>Average</b>
Laxmi Bank Ltd	5.80	10.75	16.45	20.70	24.12	15.56
Nepal Investment Bank Ltd	59.35	62.57	57.87	37.42	52.55	53.95
Nabil Bank Ltd.	129.21	137.08	108.31	106.76	78.61	111.99
Himalayan Bank Ltd	59.24	60.66	62.74	61.90	31.80	55.27
Everest Bank Ltd.	62.78	78.42	91.82	99.99	100.16	86.63

Source: [www.nrb.org.com](http://www.nrb.org.com)

The average EPS of sample banks are more than Rs. 50 except Laxmi Bank Ltd (Rs 15.56). The market leader in this segment is NABIL with the average EPS of Rs. 111.99. The lowest average EPS is Rs. 15.56 of Laxmi Bank Ltd. The NABIL is the only bank that has Maximum EPS more than Rs. 100 in the period of 5 years compare to bank. The lowest EPS recorded was Rs 5.80 of Laxmi Bank Ltd in the year 2005/06. The reason of this low EPS was due to the fact that the earning declined sharply in the year and there was a declaration of bonus shares:

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.4.1: EPS of Sample Banks**



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

### 4.3.2 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 dividend by the number of ordinary shares outstanding. That is,

$$\text{Dividend per share} = \frac{\text{Dividend available to ordinary shareholders}}{\text{No. of stocks outstanding}}$$

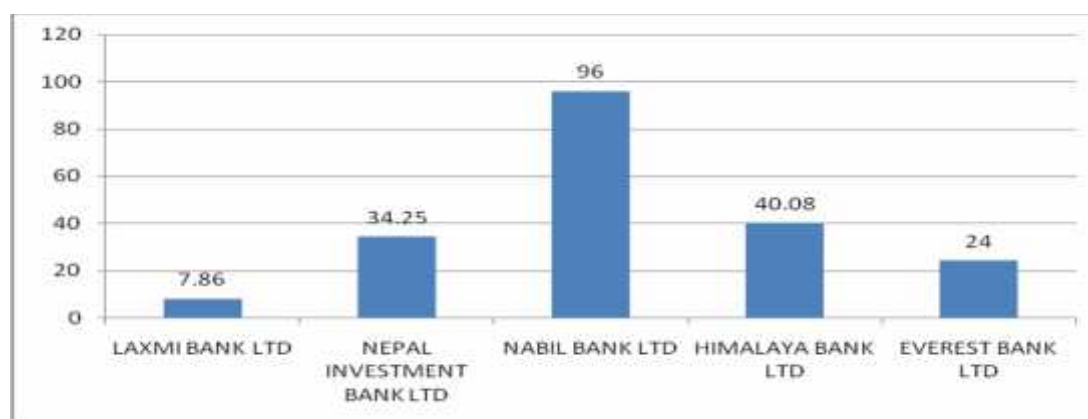
**Table - 4.4: DPS of the sample banks (in RS.)**

<b>Banks</b> \ <b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
1, Laxmi Bank Ltd	-	-	21.05	5.26	13	7.86
2. Nepal Investment Bank	55.46	30	40.83	20	25	34.25
3. NABIL Bank Ltd.	85	140	100	85	70	96
4. Himalaya Bank Ltd.	35	40	45	43.56	36.84	40.08
5. Everest Bank Ltd.	-	30	30	30	30	24

Source: [www.nabilbank.com](http://www.nabilbank.com)

Nabil Bank Ltd seems prominent in declaring large amount of dividend. The average dividend of NABIL is Rs 96 per share, which is nearly double of second highest average dividend of Himalaya Bank Ltd. The NABIL has been continuously offering Rs 70 and more as dividend per share in the period of study. All selected banks i.e. Nepal Investment Bank, NABIL Bank, Himalayan Bank except Laxmi Bank Ltd in the year 2005/06, 2006/07 and EVEREST BANK year 2005/06 are not offering dividend to shareholders during the study period. Everest bank has the lowest DPS in average Rs.24 The following figure presents the average DPS of sample banks during the period of 5 years.

**Fig 4.2: DPS of sample Banks**



The figure clearly shows that the NABIL is the top on dividend per share. Himalaya Bank Ltd is also paying the dividend where as Laxmi Bank, NIBL, and EBL are nearly equal on average dividing offering during the study period. 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.

### 4.3.3 Market Price Per Share

The market price of share is very important for all stakeholders. Generally, good market price per share is the face 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 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.

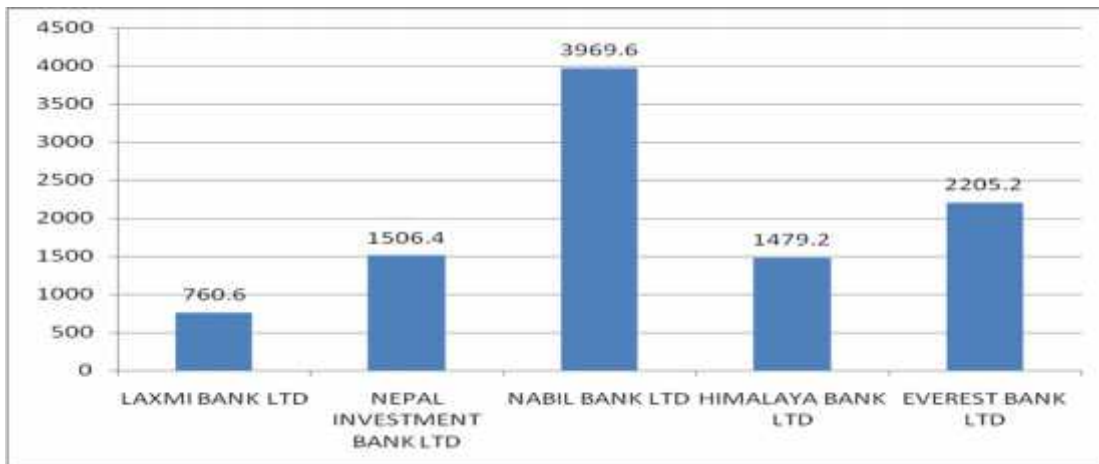
**Table - 4.5: MPS of the selected banks (in RS.)**

<b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
<b>Laxmi Bank Ltd</b>	368	690	1113	1062	570	760.6
<b>Nepal Investment Bank</b>	1260	1729	2450	1388	705	1506.4
<b>NABIL Bank Ltd.</b>	2240	5050	5275	4899	2384	3969.6
<b>Himalaya bank Ltd.</b>	1100	1740	1980	1760	816	1479.20
<b>Everest Bank Ltd.</b>	1379	2430	3132	2455	1630	2205.2

Source: [www.himalayanbank.com](http://www.himalayanbank.com).

Market price per share shows the value of each share at a glance. From the above table, the average MPS of NABIL has the higher value in comparison of other banks. It has the values of Rs. 3969.6. That means NABIL is showing good performance over this period. The lowest of all banks is the LB Ltd, which has average MPS of Rs. 760.60. The market prices of all the banks are in the increasing trend except for decrease in market price in the year 2008/09, 2009/10

**Fig 4.3: Market Price of Sample Banks**



The above figure clearly shows that market price of NABIL has the highest value whereas Laxmi Bank Ltd. has the lowest market price.

#### **4.3.4 Price Earnings Ratio**

Price earning multiple is the relationship between earning per share and market price of the stock. Earnings per share shows the company's 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 ratio multiple reflects the price currently being paid by the market for each rupee of currently reported EPS. In other words, the P\E ratio measures investor's 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.

$$\text{P}\backslash\text{E ratio} = \frac{\text{Market price of a share}}{\text{Earning price per share}}$$

**Table- 4.6: Price earnings ratio of sample banks**

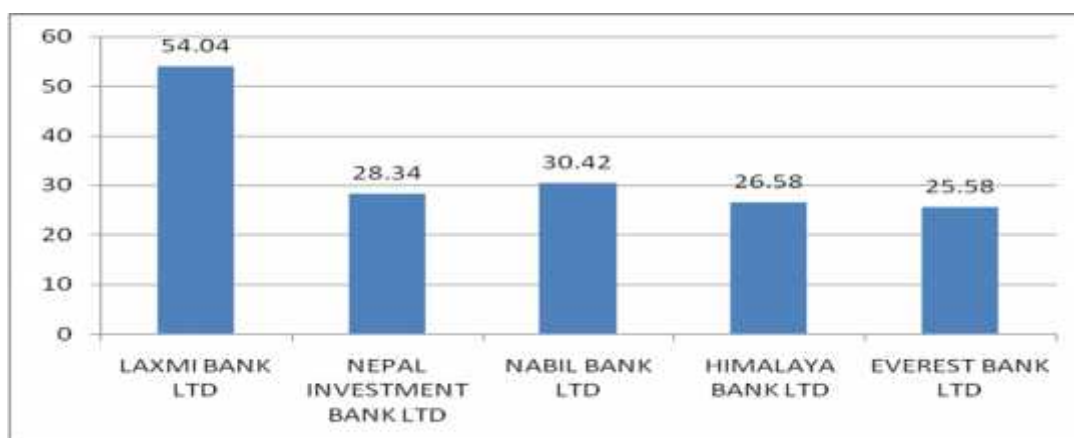
<b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
<b>Banks</b>						
Laxmi Bank Ltd.	63.44	64.18	67.66	51.31	23.63	54.04
Nepal Investment Bank	21.23	27.63	42.33	37.10	13.42	28.34
NABIL Bank Ltd.	17.34	36.84	48.70	45.89	30.33	30.42
Himalayan Bank Ltd.	18.57	28.69	31.56	28.43	25.66	26.58
Everest Bank Ltd.	21.97	30.99	34.11	24.55	16.27	25.58

Source: www.laxmibank.com

The P/E ratio is an important indicator of the performance of stock in stock market. In this criterion, the Laxmi Bank Ltd. has the highest average P/E ratio among all samples. It has 54.04 average P/E ratios during the period of study. All the sample banks have the increasing the trend except the year 2008/09 and the year 2009/10. The less volatility in P/E ratio during the study period is the sign of good consistency performance. The consistency in 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 presented the average P/E ratio of selected samples between the period 2005/06 and 2009/2010

**Fig. 4.4: Price Earning Ratio of Sample Banks**



The above chart clearly shows that the Laxmi Bank Ltd. have the highest P/E ratio in average during the study period NIB, NABIL, Himalayan and Everest have the nearly equal in P/E Ratio.

#### 4.3.5 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 profit after tax and preference dividends 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,

$$\text{D/P Ratio} = \frac{\text{Dividend per share (DPS)}}{\text{Earning per share (EPS)}}$$

**Table - 4.7: Dividend Payout Ratio of Sample Banks**

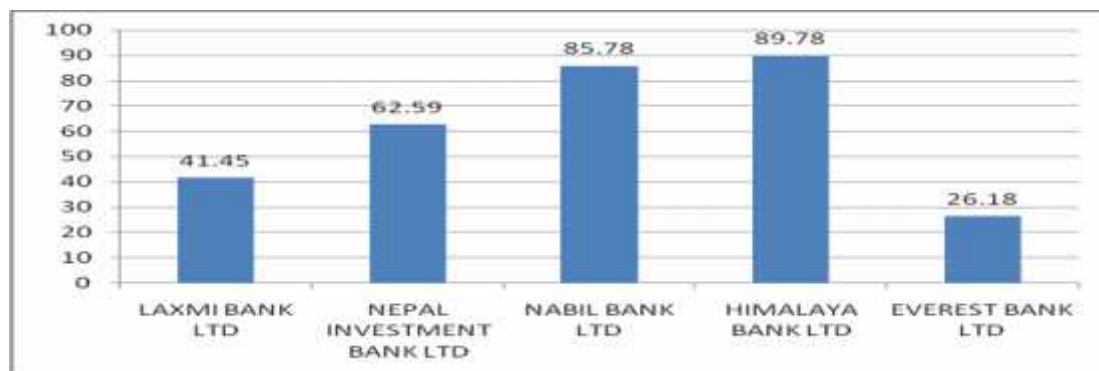
<b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
<b>Banks</b>						
Laxmi Bank Ltd	0	0	127.96	25.41	53.89	41.45
Nepal Investment Bank	93.45	47.95	70.55	53.44	47.57	62.59
NABIL Bank Ltd.	65.78	102.13	92.33	79.62	89.05	85.78
Himalaya Bank Ltd	59.08	65.94	71.72	70.37	115.85	89.78
Everest Bank Ltd.	-	38.26	32.67	30	29.95	26.18

Source: [www.everestbank.com](http://www.everestbank.com)

On average, the Himalayan Bank Ltd. has the highest rate of payout among all selected Banks. The table shows the average payout ratio of Himalaya is 89.78% while the second highest payout ratio is 85.78% of Nabil bank Ltd. The highest payout ratio among all samples during the period of study was 127.96 of Laxmi Bank Ltd. in the year 2007/08. Such a high payout ratio is done to declaration of very high dividend per share in comparison to previous year. Dividend payout ratios of Laxmi Bank Ltd., Investment Bank Ltd. and Everest Bank Ltd are 41.45, 62.59 and 26.18 respectively. All the sample banks are not consistent. The

high and consistent dividend payout ratio has positive impact on the behavior in the market price of the stock. A good payout ratio helps the stock price to move upward. The figure shows the average payout ratio of selected sample between the period 2005/06 and 2009/10

**Fig 4.5: Dividend Payout Ratio of Sample Banks**



#### 4.3.6 Dividend Yield

Dividend yield shows the relationship between dividend per share and market price per share. The dividend yield is calculated by dividing the cash dividend per share by the market value per share. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend per share}}{\text{Market value per share}}$$

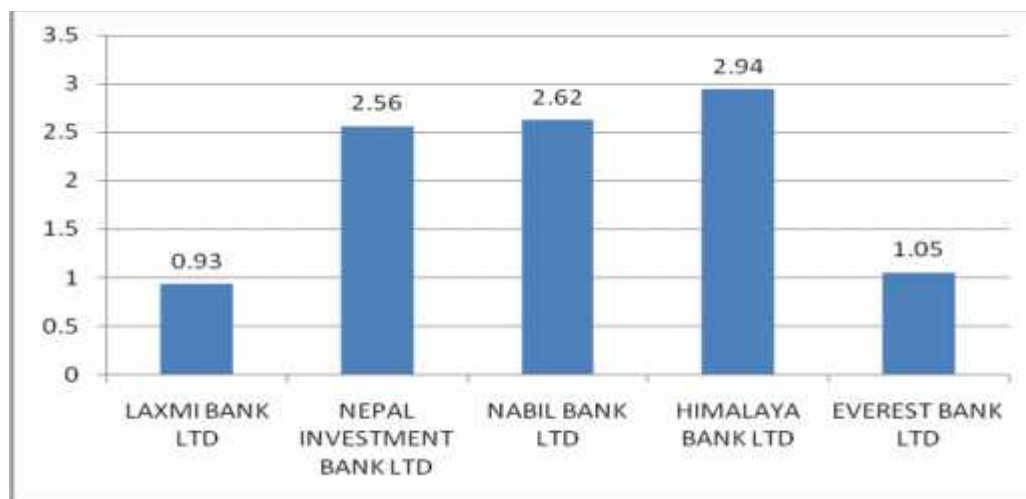
**Table - 4.8: Dividend Yield of Sample Banks**

<b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
<b>Banks</b>						
Laxmi Bank Ltd	0	0	1.89	.49	2.28	.93
Nepal Investment Bank	4.40	1.73	1.67	1.44	3.54	2.56
NABIL Bank Ltd.	3.79	2.77	1.89	1.74	2.93	2.62
Himalayan Bank Ltd	3.18	2.29	2.27	2.47	4.51	2.94
Everest Bank Ltd.	0	1.23	.95	1.22	1.84	1.05

Source: [www.nrb.org.com.np](http://www.nrb.org.com.np)

The dividend yield is another major factor that affects the behavior of stock price in market. A high and consistent yield generally increases the market price of stock. In this parameter, the Himalayan is the best among the selected banks. Its share is earning a good return in each of the year with steady rate. The yielding rate of Himalayan 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 Laxmi is very low comparative to other banks. Its share is yielding only .93% on average and is the lowest among all banks. The average dividend yield can also be presented in graph as well. The following figure shows the average dividend yield rate between the period 2005/06 and 2009/10.

**Fig. 4.6: Dividend Yield of Sample Banks**



#### 4.3.7 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.

$$\text{Earning Yield} = \frac{\text{Earning per Share}}{\text{Market value per Share}}$$

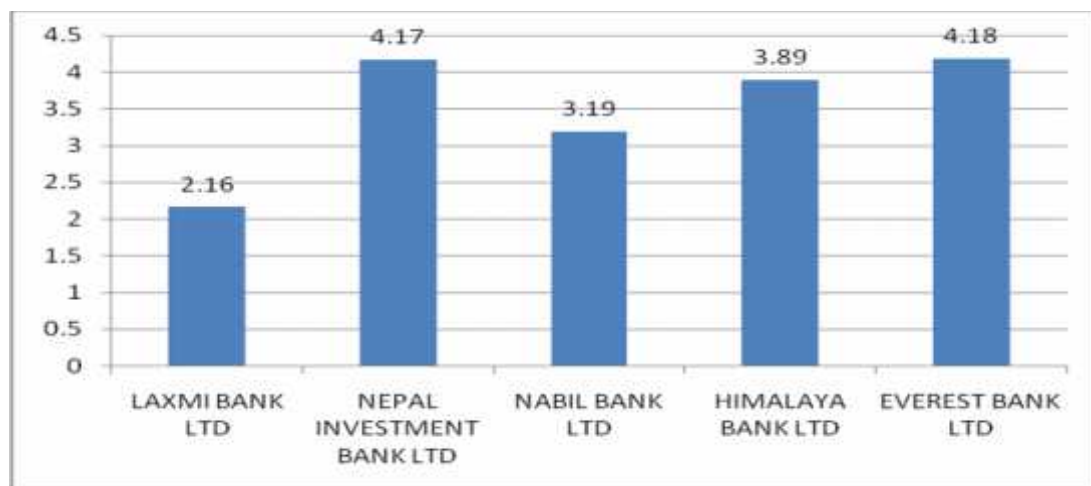
**Table- 4.9: Earning Yield of Sample Banks**

<b>Years</b>	2005/06	2006/07	2007/8	2008/09	2009/10	<b>Average</b>
<b>Banks</b>						
Laxmi Bank Ltd	1.57	1.55	1.48	1.95	4.23	2.16
Nepal Investment Bank Ltd	4.71	3.62	2.36	2.69	7.45	4.17
NABIL Bank Ltd.	5.76	2.71	2.05	2.18	3.29	3.19
Himalaya Bank Ltd	5.38	3.48	3.17	3.52	3.89	3.89
Everest Bank Ltd.	4.55	3.23	2.93	4.07	6.14	4.18

Source: www.nibl.com.np

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. On this criterion, the stocks of all sample banks are closely competitive except Laxmi Bank Ltd. The highest average earning yield is 4.18% of Everest and the lowest yield is 2.16% of Laxmi. In the average,

**Fig. 4.7: EY of sample banks**



#### 4.3.8 Market Price to Book Value Ratio

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

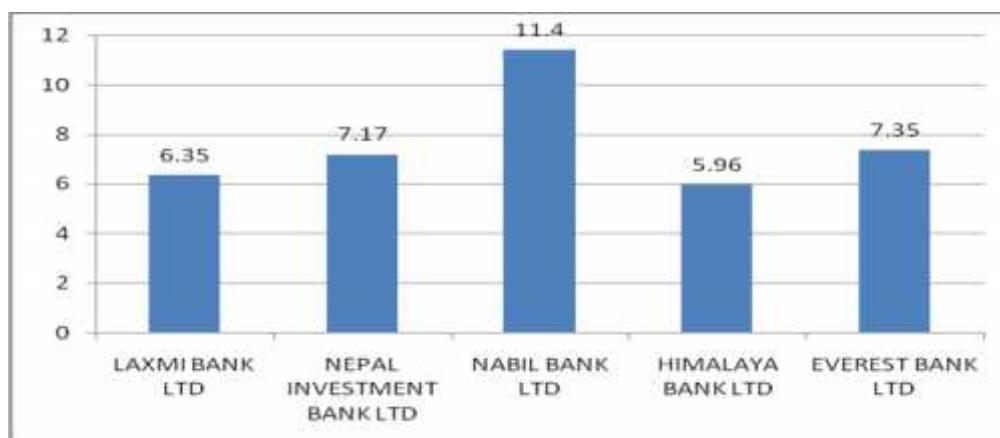
$$\text{MV/BV Ratio} = \frac{\text{Market Value per Share}}{\text{Book Value per Share}}$$

**Table - 4.10: MV/BV Ratio of Sample Banks**

<b>Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
<b>Banks</b>						
Laxmi Bank Ltd.	3.45	5.96	8.87	8.68	4.80	6.35
Nepal Investment Bank Ltd.	5.25	7.37	10.98	8.54	3.70	7.17
NABIL Bank Ltd.	5.87	12.08	14.90	15.12	8.99	11.4
Himalayan Bank Ltd.	4.81	6.57	7.98	6.86	3.59	5.96
Everest Bank Ltd.	6.33	8.65	9.73	7.11	4.91	7.35

The book value of 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 NABIL, on average, seems the best among all selected samples. The NABIL has the ratio of 11.4 while the lowest ratio is 5.96 of HBL. In the year 2008/09 the stock of NABIL has 15.12 times ratio which means that the market price of the share is 15.12 times higher than its book value. The stock of NABIL has nearly highest ratio in each individual sample years. The difference among the sample bank is very low on average. The following figure illustrates the average market value to book value ratio.

**Fig.4.8: MV/BV Ratio of Sample Banks**



### 4.3.9 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.

$$\text{Liquidity Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

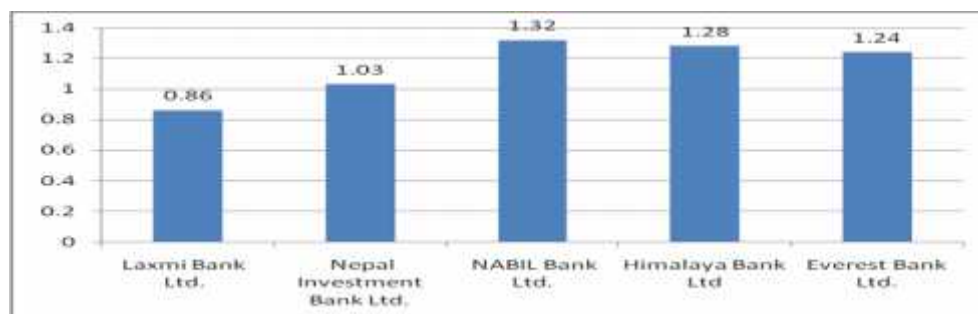
**Table - 4.11: Liquidity Ratio of Sample Banks**

<b>Banks \ Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
Laxmi Bank Ltd	0.50	0.68	0.73	1.11	1.26	0.86
Nepal Investment Bank Ltd	1.16	1.32	1.11	0.17	1.39	1.03
NABIL Bank Ltd.	1.27	1.43	1.58	1.23	1.13	1.32
Himalaya Bank Ltd	1.36	1.23	1.24	1.24	1.35	1.28
Everest Bank Ltd.	1.72	1.22	1.31	0.99	0.96	1.24

Source: [www.nrb.org.com.np](http://www.nrb.org.com.np)

The liquidity position of NABIL shows the highest ratio among all the selected banks with the value of 1.32. The lowest liquidity ratio is 0.86 of Laxmi Bank Ltd. 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 except Laxmi Bank Ltd. The following figure shows the liquidity ratios of all selected banks.

**Fig 4.9: Liquidity ratio of Sample Banks**



### 4.3.10 Return on Total Assets (ROA)

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:

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

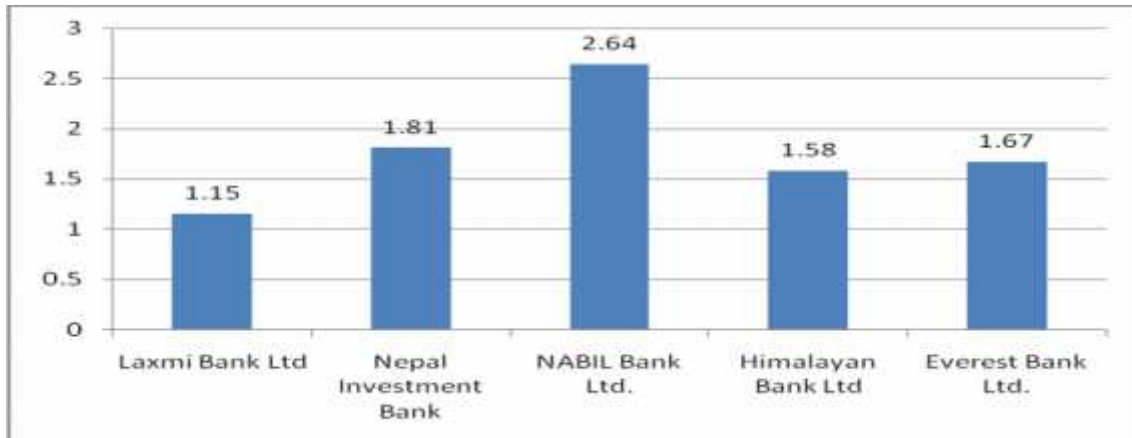
**Table - 4.12: ROA of Sample Banks**

<b>Banks \ Years</b>	2005/06	2006/07	2007/08	2008/09	009/10	<b>Average</b>
Laxmi Bank Ltd	0.79	0.95	1.13	1.22	1.66	1.15
Nepal Investment Bank Ltd	1.61	1.79	1.77	1.68	2.19	1.81
NABIL Bank Ltd.	3.23	2.72	2.32	2.55	2.37	2.64
Himalayan Bank Ltd	1.55	1.47	1.76	1.91	1.19	1.58
Everest Bank Ltd.	1.49	1.38	1.65	1.73	2.09	1.67

Source: [www.nabilbankltd.com.np](http://www.nabilbankltd.com.np)

The ROE of NABIL is the highest with 2.64% while the lowest ROA is 1.15% of Laxmi Bank. All of the banks ROA are more than 1% which is acceptable. Only NABIL has more than 2% of ROA for the period of five years. Higher ROA generally pushes the market price upward. The figure below shows the average ROA for all sample banks for the given period of study. i.e. 2005/06 to 2009/2010.

**Fig. 4.10: ROA of Sample Banks**



### 4.3.11 Return on Common Equity

The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher these returns, the better off are the owners. Return on common equity is calculated as follows:

$$\text{Return on Common Equity} = \frac{\text{Net Profit after tax}}{\text{Shareholder's Equity}}$$

**Table - 4.13: ROE of Sample Banks**

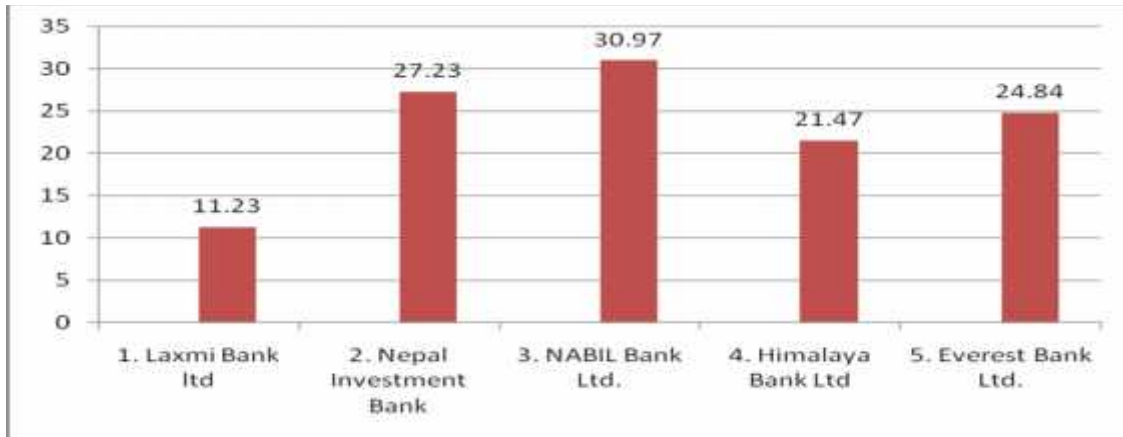
<b>Banks \ Years</b>	2005/06	2006/07	2007/08	2008/09	2009/10	<b>Average</b>
1. Laxmi Bank Ltd	5.02	7.14	13.05	14.01	16.91	11.23
2. Nepal Investment Bank	29.08	34.31	25.29	22.16	25.32	27.23
3. NABIL Bank Ltd.	30.83	33.29	28.72	32.35	29.68	30.97
4. Himalaya Bank Ltd	23.79	21.10	24.36	23.85	14.23	21.47
5. Everest Bank Ltd.	22.15	22.25	22.50	27.94	29.37	24.84

Source: [www.laxmibank.com.np](http://www.laxmibank.com.np)

The ROE of NABIL is the highest among all selected banks. NABIL's average ROE is 30.97%. The lowest ROE is 11.23% of Laxmi Bank Ltd. Investors seek higher ROE for investment. In this regard, the NABIL's stock is excellent while the stock of NABIL is also

good during the period of the study. The following figure presents the average ROE for 5 years of study.

**Fig.4.11: ROE of Sample Bank**



#### **4.4 Analysis of Relationship of Price with Earnings and Dividend**

This study, here tries to analyze whether earning and dividend is 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 rises, 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.

##### **4.4.1 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. The formula used to calculate the coefficient of correlation is

## A) Laxmi Bank Ltd

**Table - 4.14: Correlation between EPS and MPs of LB LTD**

<b>Year</b>	<b>EPS</b>	<b>MPS</b>
2005/06	5.80	368
2006/07	10.75	690
2007/08	16.45	1113
2008/09	20.70	1062
2009/10	24.12	570
<i>Average</i>	15.57	760.60
<i>Standard Deviation</i>	7.39	212.67
<i>Coefficient of Correlation</i>	.70	

The table shows the earning per share and market price per share of Laxmi Bank Limited from the year 2005/06 to 2009/10. The average of earning per share is Rs. 15.57 and the average market price per share is 760.60. The standard deviation of earning per share and market price per share is 7.39 and 212.67 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 70. This shows that EPS and MPS are positively correlated.

## B) Nepal Investment Bank

**Table - 4.15: Correlation between EPS and MPS of NIB**

<b>Year</b>	<b>EPS</b>	<b>MPS</b>
2005/06	59.35	1260
2006/07	62.57	1729
2007/08	57.87	2450
2008/09	37.42	1388
2009/10	52.55	705
<i>Average</i>	53.95	1506.40
<i>Standard Deviation</i>	9.92	643.60
<i>Coefficient of Correlation</i>	.28	

The table shows the earning per share and market price per share of Nepal Investment Bank from the year 2005/06 to 2009/10. The average of earning per share is Rs. 53.95 and the average market price per share is 1506.60. The standard deviation of earning per share and market price per share is 9.92 and 643.60 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 .28. This shows that EPS and MPS are positively correlated.

### C) NABIL Bank Limited

**Table - 4.16: Correlation between EPS and MPS of NABIL Bank LTD**

<b>Year</b>	<b>EPS</b>	<b>MPS</b>
2005/06	129.21	2240
2006/07	137.08	5050
2007/08	108.31	5275
2008/09	106.76	4899
2009/10	78.61	2384
<i>Average</i>	111.99	3969.60
<i>Standard Deviation</i>	22.81	1519.93
<i>Coefficient of Correlation</i>	.29	

The table shows the earning per share and market price per share of NABIL Bank Limited from the year 2005/06 to 2009/10. The average of earning per share is Rs. 111.99 and the average market price per share is 3969.60. The standard deviation of earning per share and market price per share is 22.81 and 1519.93 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 .29. This shows that EPS and MPS are positively correlated.

#### D) Himalaya Bank Ltd

**Table - 4.17: Correlation between EPS and MPS of HBL**

<b>Year</b>	<b>EPS</b>	<b>MPS</b>
2005/06	59.24	1100
2006/07	60.66	1740
2007/08	62.74	1980
2008/09	61.90	1760
2009/10	31.80	816
<i>Average</i>	55.27	1479.20
<i>Standard Deviation</i>	13.18	495.30
<i>Coefficient of Correlation</i>	.81	

The table shows the earning per share and market price per share of Himalaya Bank Limited from the year 2005/06 to 2009/10. The average of earning per share is Rs. 55.27 and the average market price per share is 1479.20. The standard deviation of earning per share and market price per share is 13.18 and 5495.30 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 .81. This shows that EPS and MPS are positively correlated.

#### E) Everest Bank Limited

**Table - 4.18: Correlation between EPS and MPS of EBL**

<b>Year</b>	<b>EPS</b>	<b>MPS</b>
2005/06	62.78	1379
2006/07	78.42	2430
2007/08	91.82	3132
2008/09	99.99	2455
2009/10	100.16	1630
<i>Average</i>	86.63	2205.20
<i>Standard Deviation</i>	16	704.51
<i>Coefficient of Correlation</i>	.40	

The table shows the earning per share and market price per share of Everest Bank Limited from the year 2005/06 to 2009/10. The average of earning per share is Rs. 86.63 and the

average market price per share is 2205.20. The standard deviation of earning per share and market price per share is 16 and 704.51 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 0.40. This shows that EPS and MPS are positively correlated.

#### 4.4.2 Coefficient of Correlation between Prices 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) Laxmi Bank Limited

**Table - 4.19: Correlation between DPS and MPS of LB.LTD**

<b>Year</b>	<b>DPS</b>	<b>MPS</b>
2005/06	-	368
2006/07	-	690
2007/08	21.05	1113
2008/09	5.26	1062
2009/10	13	570
<i>Average</i>	8.91	760.60
<i>Standard Deviation</i>	9.17	380.29
<i>Coefficient of Correlation</i>	.56	

The table shows the dividend per share and market price per share from the year 2005/06 to 2009/10. The average of DPS and MPS is Rs. 8.91 and Rs.760.60. The standard deviation of dividend per share and market price is 9.17 and 380.29. 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.

## B) Nepal Investment Bank

**Table - 4.20: Correlation between DPS and MPS of NIB**

<b>Year</b>	<b>DPS</b>	<b>MPS</b>
2005/06	55.46	1260
2006/07	30	1729
2007/08	40.83	2450
2008/09	20	1388
2009/10	25	705
<i>Average</i>	34.26	1506.40
<i>Standard Deviation</i>	14.14	643.60
<i>Coefficient of Correlation</i>	0.26	

The table shows the dividend per share and market price per share from the year 2005/06 to 2009/10. The average of DPS and MPS is Rs. 34.26 and Rs.1506.40. The standard deviation of dividend per share and market price is 14.14 and 643.60. The coefficient of correlation between dividend per share and market price per share is 0.26. This shows that DPS and MPS are positively correlated.

## C) NABIL Bank Limited

**Table - 4.21: Correlation between DPS and MPS of NABIL Bank Ltd.**

<b>Year</b>	<b>DPS</b>	<b>MPS</b>
2005/06	85	2240
2006/07	140	5050
2007/08	100	5275
2008/09	85	4899
2009/10	70	2384
<i>Average</i>	96	3969.60
<i>Standard Deviation</i>	26.79	1519.85
<i>Coefficient of Correlation</i>	.63	

The table shows the dividend per share and market price per share from the year 2005/06 to 2009/10. The average of DPS and MPS is Rs. 96 and Rs.1519.85. The standard deviation of dividend per share and market price is 26.79 and 1519.85 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 0.63 This shows that DPS and MPS are perfectly positively correlated. Any increment in DPS will result positively on the market price of share

#### **D) Himalaya Bank Limited**

**Table - 4.22: Correlation between DPS and MPS of HBL**

<b>Year</b>	<b>DPS</b>	<b>MPS</b>
2005/06	35	1100
2006/07	40	1740
2007/08	45	1980
2008/09	43.56	1760
2009/10	36.84	816
<i>Average</i>	40.08	1479.2
Standard Deviation	4.44	495.30
Coefficient of Correlation	0.36	

The table shows the dividend per share and market price per share from the year 2005/06 to 2009/10. The average of DPS and MPS is Rs. 40.08 and Rs. 1479.20. The standard deviation of dividend per share and market price is 4.44 and 495.30. The coefficient of correlation between dividend per share and market price per share is 0.36. This shows that DPS and MPS are positively correlated.

**E) Everest Bank Limited**

**Table - 4.23: Correlation between DPS and MPS of EBL**

Year	DPS	MPS
2005/06	-	1379
2006/07	30	2430
2007/08	30	3132
2008/09	30	2455
2009/10	30	1630
<i>Average</i>	24	2205.20
<i>Standard Deviation</i>	13.42	704.51
<i>Coefficient of Correlation</i>	0.65	

The table shows the dividend per share and market price per share from the year 2005/06 to 2009/10. The average of DPS and MPS is Rs. 24 and Rs. 2205.20. The standard deviation of dividend per share and market price is 13.42 and 704.51. 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 0.65. This shows that DPS and MPS are highly positively correlated.

**4.4.3 Regression Analysis of Y (MPS) on X (EPS), Y on X (DPS)**

The regression equation for simple regression is:

$$Y = a + bX \dots\dots\dots (i)$$

$$\sum Y = na + b\sum X \dots\dots\dots (ii)$$

$$\sum YX = a\sum X + b\sum X^2 \dots\dots\dots (iii)$$

Where,

Regression equation of MPS on EPS,

$$\sum X=323, \sum Y =9921, \sum YX =810453, \sum X^2=26310$$

Regression equation of MPS on DPS,

$$\sum X=202, \sum Y =9921, \sum YX =550477, \sum X^2=12612$$

After solving the above equation, the result is as follows.

**Table - 4.24: Simple Regression Analysis of Overall Selected Banks**

Dependent Variable(MPS)	Intercept (a)	Slope (b)	Independent Variable
Y	137.22	31.14	X (EPS)
Y	625.95	33.62	X (DPS)

Sources: Appendix IV

When independent variable EPS and DPS is zero, the value of dependent variable Y becomes 137.22 and 625.95 respectively. Similarly, if per rupee change in independent variable then the rate of change in dependent variable is Rs. 31.14 and Rs. 33.62 respectively. It also shows the positive relationship between MPS and EPS and also MPS and DPS respectively.

#### 4.4.4 Multiple Regression Analysis

The multiple regression equation of Y on X1 and X2 is:

$$Y = a + b_1X_1 + b_2X_2 \quad \dots\dots\dots (i)$$

$$\sum Y = na + b_1\sum X_1 + b_2\sum X_2 \quad \dots\dots\dots (ii)$$

$$\sum X_1Y = a\sum X_1 + b_1\sum X_1^2 + b_2\sum YX_1 \quad \dots\dots\dots (iii)$$

$$\sum X_2Y = a\sum X_2 + b_1\sum YX_2 + b_2\sum X_2^2 \quad \dots\dots\dots (iv)$$

Here,

$$\sum Y = 9921, \sum X_1 = 323, \sum X_2 = 202, \sum YX_1 = 810453,$$

$$\sum X_1^2 = 26254, \sum YX_2 = 550866, \sum X_2^2 = 12633, \sum X_1X_2 = 17015$$

After solving the above equations, the result is as follows:

**Table - 4.25: Regression analysis on Y on X<sub>1</sub>(EPS) and X<sub>2</sub>(DPS)**

Sectors	Regression Coefficient				
	a	b <sub>1</sub>	b <sub>2</sub>	R <sup>2</sup>	S.E.E
MPS on EPS and DPS	162.92	18.56	-0.25	.98	200.12

Sources: Appendix IV

Now, we have the regression equation as  $Y = 162.92 + 18.56X_1 - 0.25X_2$

The equation Y indicates dependent variable i.e. MPS and where as  $X_1$  and  $X_2$  are EPS and DPS.  $a$ ,  $b_1$  and  $b_2$  are constant. When EPS and DPS change positively or negatively it will affect the MPS because MPS is dependent Variable.

Here,  $a$  shows the value of dependent variable y-intercept. It also shows the value of Y when  $X_1=X_2=0$ . The above table shows the value of multiple coefficient of determination  $r^2$  is 0.98 which shows that independent variables EPS and DPS explain 98% variation to the dependent variable MPS. And remaining 1% variation affected due to other variables. Similarly,  $b_1$  and  $b_2$  are 18.56 and -0.25 which shows that increase or decrease in rupee 1 EPS and DPS leads to increase or decrease of RS. 18.56 and RS. (.25) in MPS respectively. There was positive relationship between MPS and EPS where as negative relationship between MPS and DPS. Standard error of the estimate can be used to determine whether statistically significant relationship exists between the dependent and given independent variables. The lesser the value of the standard error of estimate the better is the model fitted.

## **4.5 Analysis of Primary Data**

In this section, the collection data from primary sources has been tabulated and analyzed. For the purpose of primary data collection, 100 questionnaires were sent to investor and non-investor but only 90 respondents returned the questionnaire. Similarly, the question number 12 was asked to brokers and 60 were to investors and remaining to public. The analysis of primary data was classified into analysis of opinion survey and test of hypothesis.

### **4.5.1 Analysis of Opinion Survey**

Regarding investment in financial securities whether respondents have invested in securities or not i.e. question no. 1 (see appendix -IV) was asked to randomly-selected respondents. The whole respondents, for the purpose of analysis, the collected data are classified in to two groups (i.e. investors and brokers). The analysis is shown in the following table.

**Table - 4.26: Investor's Invest in Securities**

S.N	Research variables	Investors		Brokers		total	
		No.	%	No.	%	No.	%
A	Yes	58	74	12	100	70	78
B	No	20	26	0	0	20	22
	<b>Total</b>	<b>78</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>90</b>	<b>100</b>

Source: Field Survey

At the time of classification, out of 90 total respondents, 78 were found from public and 12 from brokers. It is clear from the table no. 4.26. 74% of public had invested in securities while 100% of broker respondents had invested. In overall 78% of total respondents had invested in securities. Sources of idea about investment at first Most of Nepalese people had well known about real investment (i.e. non- securities investment in building, machinery, factories etc.) but financial investment (i.e. securities investment like investment in common stock, preferred stock, bond etc.) is still new phenomena for them. Therefore, it was tried to know their first source of idea about securities investment. For this purpose, question no. 2 (see in appendix IV) was asked to randomly selected respondents. The analysis is as follows.

**Table - 4.27: Sources of Idea about Investment at First**

S.N	Research variable	No. of respondents	%
A	From friends	20	22
B	From stock broker	10	11
C	From relatives	35	39
D	Myself	25	28
	<b>Total</b>	<b>90</b>	<b>100</b>

In the above table, 39% of respondents had known from relative about securities investment at first, and rest of 28%, 22%, and 11% of respondents had get the idea about securities investment at first from themselves, from friends and stockbrokers respectively.\

### Consideration of risk and return before investing

Consideration of risk and return factors before investing in securities is important to get success from securities investment. In this respect, one question was asked to respondents to measure the awareness of respondents about risk and return. For this purpose the respondents were classified, based on the respondents answer to the question no.3 in following two groups.

**Table – 4.28: Awareness of Investors in Risk**

S.N	Research variables	Investors		Brokers		Total	
		No.	%	No.	%	No.	%
<b>A</b>	Return only	15	19	0	0	15	17
<b>B</b>	Risk only	7	9	0	0	7	8
<b>C</b>	Risk and return	50	64	12	100	62	68
<b>D</b>	I don't know	6	8	0	0	6	7
	<b>Total</b>	<b>78</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>90</b>	<b>100</b>

The table no.4.28 classifies in investor group, 68% of investor replied the answer to both risk and return to be considered, 17% replied return only to be considered, replied of risk and I don't know had 8% and 7% respectively.

### Diversification of risk by portfolio investment

Some portion of the total risk can be diversified by the portfolio investment. In this regard, respondents were again asked to find the awareness of them. For this analysis, the collected data are analyzed in the table no. 4.29.

**Table - 4.29: Awareness of investors (in term of risk diversified)**

S.N	Research variables	Investors		Brokers		total	
		No.	%	No.	%	No.	%
<b>A</b>	Yes	60	77	12	100	72	80
<b>B</b>	No	18	23	0	0	18	20
	<b>Total</b>	<b>78</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>90</b>	<b>100</b>

In the group of investors, 80% of investors were aware of investment and rest of 20% was not aware of investment, that is some risk can be diversified by portfolio investment.

## Valuation of securities

The next question is about the valuation of securities (What type of share should buy form securities market?) asked to the respondents. The collected answers to this question were classified again into following two groups.

**Table - 4.30: Awareness of Investors in Pricing**

S.N	Research Variables	Investors		Brokers		Total	
		No.	%	No.	%	No.	%
A	Under valued	30	38	12	100	42	47
B	Over valued	25	32	0	0	25	28
C	I don't know	23	30	0	0	23	25
<b>Total</b>		<b>78</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>90</b>	<b>100</b>

## Most preferred sector to invest

In this present situation 135 companies are listed in NEPSE .Large number of company's shares of different sectors were available for investment. In such of mass alternatives, investors can sacrifices their fund on the best companies' shares. Therefore, the researcher had tried to survey the different eight sectors in which the investors like to invest most.

**Table - 4.31: People's Preferred Sector to Invest**

S.N	Research variable	No. of respondent	%
A	Banking	45	50
B	Insurance	6	6
C	Development	8	9
D	Finance	10	11
E	Hotels	5	6
F	Manufacturing & processing	7	8
G	Trading	3	3
H	others	6	7
<b>Total</b>		<b>90</b>	<b>100</b>

It is found that 50% of respondents were most interested to invest in banks. 6%, 9%, 11%, 6%, 8%, 3% and 7% respectively of respondents were found most interested to invest in the share of insurance, development bank, finance, hotels, manufacturing & processing, trading and other respectively.

### Satisfaction from securities investment

Regarding the satisfaction with presently return from share investment, 90 randomly selected respondents were asked whether they were satisfied or not from presently getting return on share investment.

**Table - 4.32: Satisfaction from securities investment**

S.N	Research variables	No. of respondents	%
A	Yes	72	80
B	No	18	20
	<b>Total</b>	<b>90</b>	<b>100</b>

80% of the investors replied that they were satisfied from the return of share investment but remaining 20% replied that they were not satisfied from the return of investment on share.

### Satisfaction with government efforts

Regarding satisfaction of respondents with government efforts to develop stock market in Nepal, the selected investors and broker were asked to question. for the purpose of analysis, the collected answers from the investors and brokers were considered

**Table - 4.33: Satisfaction with Government Efforts**

S.N	Research variables	Investors		Brokers		Total	
		No.	%	No.	%	No.	%
A	Yes	62	79	1	8	63	70
B	No	16	21	11	92	27	30
	<b>Total</b>	<b>78</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>90</b>	<b>100</b>

### **Main cause of being reluctant to invest in securities**

After the avenue of democracy in Nepal, participation of private sector is highly motivated. As a result, Nepalese people are invested in different sectors. Banking finance is successful to collect large deposits from domestic depositors but most of the listed companies are still unable to collect the needed fund through the issue of securities. Large number of investor's participation is the scheme for stock market development. Therefore, it was tired to know the main cause for Nepalese people to be reluctant to invest in securities.

**Table - 4.34: Main Cause of Being Reluctant to Invest in Securities**

<b>S.N</b>	<b>Research variables</b>	<b>No. of respondents</b>	<b>%</b>
<b>A</b>	Lower return	4	4
<b>B</b>	More risk	22	24
<b>C</b>	Lack of knowledge	52	58
<b>D</b>	No protection of investor right	12	14
<b>Total</b>		<b>90</b>	<b>100</b>

58% pointed the main cause of the reluctant of the securities investment is the lack of knowledge about securities investment while 24% of respondents pointed the main cause of more risk in secondary market. 14% and 4% of respondents pointed the main cause of being reluctant to invest in securities investment were no protection of investor and lower return respectively.

### **Investor's purpose in investment**

Investors have different view to investment in market. Most of investors are confuse about which factors was more benefit. The numbers of investors are increasing but real investors are very low. The different view of investors is presented below.

**Table - 4.35: Investor's Purpose in Investment**

<b>S.N</b>	<b>Research variables</b>	<b>No. of respondents</b>	<b>%</b>
<b>A</b>	Dividend	20	22
<b>B</b>	Management participant	12	13
<b>C</b>	Capital gain	45	50
<b>D</b>	Social status	13	15
<b>Total</b>		<b>90</b>	<b>100</b>

In this research 50% of investors are invested for capital gain. 22% of investors invest for dividend. Similarly, 15% for social status and 13% were for management participant.

#### **Responsible for NEPSE performance**

The investors are influenced by various factors of securities investment. Therefore, it is try to analyze the performance of NEPSE index by investors. For this purpose, the collected data are present and analyzed in following table.

**Table - 4.36: Responsible for NEPSE performance**

<b>S.N</b>	<b>Research variables</b>	<b>No. of respondents</b>	<b>%</b>
<b>A</b>	Government	35	39
<b>B</b>	Investors	25	28
<b>C</b>	Brokers	15	17
<b>D</b>	NEPSE	15	16
<b>Total</b>		<b>90</b>	<b>100</b>

The respondent voice for NEPSE performance was highly responsible of government. Similarly, 28% of investors, 17% and 16% of respondent were responsible both broker and NEPSE.

## 4.5.2 Test of Hypothesis

This sections deals with different hypothesis test, which are as follows;

### Hypothesis-1

In this section, the impact of income level of people on securities investment is tested using chi-square test. For this purpose, the whole respondents are classified according to their annual income level in the following table.

**Table - 4.37: Annual Income Level**

<b>Investment pattern</b>	<b>Below Rs. 40000</b>	<b>Between Rs. 40000 - 80000</b>	<b>Between Rs. 80000-120000</b>	<b>Above Rs. 120000</b>	<b>Row Total</b>
<b>Yes</b>	10	6	20	15	<b>51</b>
<b>No</b>	4	4	18	13	<b>39</b>
<b>Column Total</b>	<b>14</b>	<b>10</b>	<b>38</b>	<b>28</b>	<b>90</b>

### Formation of hypothesis

Null hypothesis ( $H_0$ ): securities investment is independent on income level of people or there is no significant relationship between income level of people and securities investment.

Alternative hypothesis ( $H_1$ ): securities investment is dependent on income level of people or there is significant relationship between income level of people and securities.

The computed value of  $\chi^2$  i.e. 1.6484 is lower than tabulated value of  $\chi^2$  at 5% level of significant with d.f. 3i.e. 7.815. Therefore, null hypothesis is accepted. It implies that securities investment is independent on income level of people in Nepalese context. In order word, there is significant relationship between income level of people and securities investment. Wealthy persons have also not invested but some poor persons have also invested in securities.

## Hypothesis-2

In this hypothesis, the whole respondents are classified into the following two groups according to their academic background. The main purpose of this classification is to test the hypothesis, whether persons with the academic background of management and economics are more aware about securities investment or not.

**Table - 4.38: Academic background of management and economic aware about investment or not**

<b>Academic Background</b> <b>Awareness</b>	<b>Management or Economic</b>	<b>Others</b>	<b>Row Total</b>
<b>Yes</b>	46	12	<b>58</b>
<b>No</b>	22	10	<b>32</b>
<b>Column Total</b>	<b>68</b>	<b>22</b>	<b>90</b>

### Formation of hypothesis

Null hypothesis ( $H_0$ ): the experiment does not exist any relationship between academic background and awareness about securities investment.

Alternative hypothesis ( $H_1$ ): the experiment does exist any relationship between academic background and awareness about securities investment or the people with academic background of management and economics are more awareness about securities investment than others.

Since, the calculated value of  $\chi^2$  i.e. 1.2477 lower than tabulated value of  $\chi^2$  at 5% level of significant with d.f. 1 i.e. 3.841, null hypothesis is accepted and alternative hypothesis is rejected. It can be concluded that people with academic background of management and economics are less aware about securities investment than people with academic background of others.

## Hypothesis-3

In this hypothesis, the whole respondents are classified into the following two groups according to their academic background. The main purpose of this classification is to test the

hypothesis, whether relationship between academic background of persons and securities investments or not.

**Table - 4.39: Academic Background of Persons and Securities Invest or Not**

<b>Academic Background</b> <b>Response</b>	<b>Management or</b> <b>Economic</b>	<b>Others</b>	<b>Row</b> <b>Total</b>
<b>More aware</b>	20	34	<b>54</b>
<b>Less aware</b>	30	6	<b>36</b>
<b>Column Total</b>	<b>50</b>	<b>40</b>	<b>90</b>

### **Formation of hypothesis**

Null hypothesis ( $H_0$ ): there is no significant relationship between academic background and securities investment.

Alternative hypothesis ( $H_1$ ): there is significant relationship between academic background and securities investment

Since, value of  $\chi^2$  i.e.18.7503 more than tabulated value of  $\chi^2$  at 5% level of significant with d.f. 1 i.e. 3.841, null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is associated between the people with academic background of management and economics and securities investment. It proves that people with academic background of management and economic are less aware about securities investment is significantly above than people with academic background of others subjects.

### **Hypothesis-4**

For this hypothesis, only the existing investors of securities are considered. Moreover, some NEPSE staffs and companies staffs were specially asked to collected their opinions regarding government efforts for development stock market in Nepal. Hence, the respondents are classified into the following three groups.

**Table - 4.40: Perception Towards Government Efforts**

<b>Respondent</b> <b>Response</b>	<b>NEPSE Staff</b>	<b>Companies Staff</b>	<b>Industries</b>	<b>Row Total</b>
<b>More aware</b>	15	12	32	<b>59</b>
<b>Less aware</b>	13	6	12	<b>31</b>
<b>Column Total</b>	<b>28</b>	<b>18</b>	<b>44</b>	<b>90</b>

### **Formation of hypothesis**

Null hypothesis ( $H_0$ ): there is no significant difference in the perception of NEPSE staff, companies' staffs, and investors towards government efforts for stock market development.

Alternative hypothesis ( $H_1$ ): there is significant difference in the perception of NEPSE staff, company's staffs, and investors towards government efforts for stock market development

Since, value of  $\chi^2$  i.e. 2.7859 lower than tabulated value of  $\chi^2$  at 5% level of significant with d.f. 2 i.e. 5.991, null hypothesis is accepted and alternative hypothesis is rejected. It means the perception of NEPSE staffs, companies' staffs, and investors is significant difference towards government efforts for stock market development in Nepal.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary**

Security market is one of the constituents of capital market. It has wide embracing 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 makes 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 in developing stage. 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.

To test the behavior of share prices in Nepalese stock, efficient market theory is an important and latest thought. Efficient market theory helps in channelization of savings and funds into the profitable investment for the maximum benefit to the society. The efficient market hypothesis implies that all known information is immediately discounted by all the investors and reflected in the price of share. It cannot be tested directly. However, by postulating some security price behaviors, one can analyze market efficiency. The literature on share price behavior developed during the last decades in the big economy countries such as USA, UK, Australia, etc. for testing the appropriateness of the random walk hypothesis (later known as

weak form efficient market hypothesis) that can be used to describe common stock price behavior.

This study is mainly focused to assess share price behavior i.e. the random walk or weak efficient market hypothesis and to test whether the successive price changes are independent or dependent with the price of historical changes with special reference to the banking sector. In addition, it also studies how the earning price per share, dividend price per share, price earning multiple and dividend payout ratio affect the market price of the stock. This study also attempts to focus the relationships among liquidity ratios, profitability ratios, market price to book value ratio and many other key ratios. The study period for this study is from 2005/06 to 2009/10 with the time period span of five years for five sample commercial banks. To test the independent assumption or to test the hypothesis of randomness, . The series was found to be non-random and assumption of independence was not supported by this evidence. Therefore, the random walk model was not accepted. Hence, the result demonstrated that the successive price changes are dependent with historical price changes and that the random walk model can not justifiably used to describe share price behavior of Nepal.

While analyzing development stock market during the study period, the numbers of listed companies are in increasing trend over the study period but during the first two years there was not high increase. The number was 135 in F\Y 2005/06, 135 in F\Y 2006/07, 142 in F\Y 2007/08 and 159 in F\Y 2008/09 and 176 in F\Y 2009/10 respectively. The market capitalization increased from Rs. 96763.70 million in F\Y 2005/06 to Rs 316871.30 million. There was fluctuation in percentage of turnover to market capitalization which eventually increased from 3.57 in F\Y 2005/06 to 6.23 from F\Y 2007/08 then there was dramatically decrease in F\Y 2005/06 and again there was slightly decrease from 4.22 to 3.14 in F\Y 2009/10. The percentage of turnover to paid up value also was in increasing trend for initial three years but it down in latter two years. The paid-up values of listed companies are in increasing trend. The paid-up value was Rs 19958 million F\Y 2005/06 and Rs 79356 million in F\Y 2009/10. This is largely due to declaration of bonus shares and right share issue of commercial banks, which are major players in stock market with more than 75% of the total transactions.

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 in equity. This analysis shows a mixed behavior in these relationships. Since 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 companies' performance in major aspects.

## 5.2 Conclusion

The random walk hypothesis or weakly efficient market hypothesis of share price behavior has been tested to get answer whether successive monthly price changes of sample banks' shares were independent or not. The result of the test does not support the independent assumption of random walk model which implies that the price changes in the future will be dependent on the historical price. Thus, the information of historical price is helpful to predict future prices of the shares. This study suggests that fundamental analysis becomes useful to make above average return in Nepalese stock market. Based on above conclusion, Nepalese stock market may not be defined as weakly efficient in pricing the share where market efficiency is defined as all past information is reflected in share prices.

- ) The development of stock market is not in the satisfactory level. Only the banking sector is having the high performance.
- ) The market price has high variability during study period. NABIL has high average price of Rs.3969.60 and LAXMI has the lowest market price of Rs.760.60 This high market price of shows that NABIL has the better performance than others.
- ) The overall profit of the company from the view of ordinary shareholders is the EPS. The NABIL Bank Limited has the highest EPS of RS.111.99 whereas LAXMI Bank Limited has the low EPS of Rs.15.56. The better the earning, the better is the performance.
- ) There is a fluctuation in dividend per share. NABIL shows high average dividend of Rs.96 whereas LBL shows the lowest of all i.e. Rs.7.86. The investor who is eager to invest for the long term chooses the company with high dividend.
- ) All the banks have the healthy and positive P\E multiples. Earning and price relation shows the mixed behavior. LBL has the highest P\E multiple among the entire sample banks i.e. 54.04 which shows a good performance due to their managerial efficiency and professional management whereas EBL, HBL , NIB AND NABIL has low but consistent P\E ratio with average P\E ratio of 25.58, 26.58,28.34 and 30.42 respectively.
- ) Among the sample banks HBL has the higher average dividend payout ratio of 89.18 in average. EBL has the least dividend payout ratio of 26.18.

- ) The earning yield, which measures that yield of outstanding stock, of EBL is the highest with all selected sample banks, which was 4.18%. Similarly, the lowest average earning yield was registered by LBL with 2.16%. However, each bank has good earning yield which is one of the reasons why banking sector is domination the stock market. On the other hand, the dividend yield, which measures the return of each outstanding stock, is irregular and is in decreasing tend during study period. Although all the sample banks have satisfactory earning yield but the dividend yield is very low because the company retained maximum or all amount of earning for further investment. The dividend yield of HBL has the highest average with 2.94% while the dividend yield of LBL is the lowest with .93%. The study found a mixed behavior between price and dividend, price and earning during the period of study.
- ) 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 5. This shows the market prices of banks are exceeding their book values. The stock of NABIL is priced 11 times more than its book value. The lowest ratio is of HBL with 5.96 times which can be considered satisfactory.
- ) The ROA shows the overall effectiveness of management in generating profits with its available assets. The managements of NABIL and NIB have utilized their available assets more efficiently and effectively to generate profits than other banks. The highest ROA generally pushes the market price upward. The NABIL has the highest ROA with 2.64. The ROA of LBL is the lowest with 1.15. As there are some banks with higher ROA having lower market price and vice versa, it can be concluded that there is mixed relationship between ROA and market price per share.
- ) 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 NABIL is the highest among all sample banks so does its market price of stock. The ROE of EBL is the lowest . This again shows the mixed behavior pattern between ROE and market price per share.
- ) 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 NABIL is the highest and its market price is also high. While liquidity ratio of LBL is also lowest but its market price is also lower than EBL, HBL and NIB.

- ) The coefficient of correlation between EPS and MPS shows mixed pattern. The degree of correlation between the EPS and MPS of HBL is the highest with 0.81 which is slightly higher than that of LBL. It indicates that the EPS increases by 100%, the MPS will also increase by 81% and vice-versa. All the sample banks have positive correlation between EPS and MPS.
- ) The coefficient of correlation between DPS and MPS shows mixed pattern. The degree of correlation between the DPS and MPS of EBL is the highest with 0.65. All sample banks are positively correlated in terms of DPS and MPS which can be considered as satisfactory. NIB has the lowest coefficient of correlation with 0.26. It indicates that if the DPS increases by 100%, the MPS will also increase by 26% and vice-versa.
- ) During the collection of primary data, discussion with both brokers and investors, it has been seen that they blamed each other's regarding their roles and performance.
- ) Most of the populations were interested to invest in shares. Regarding their preference of investment sectors, major portion were found preferring to invest in banking and finance companies.
- ) Correlation coefficient measures the degree of relationship between two variables whereas the regression analysis is used to measure the likely value of one variable from the known value of other variable.
- ) The cause and effect relationship is clearly indicated through regression analysis than by correlation.
- ) The regression analysis shows the positive relationship between MPS with EPS and DPS respectively.

### **5.3 Directions for Further Study**

There are several other processes for further research in the area of stock price in Nepal. If the banks provide us current data i.e. in the year 2010/011, we can present the clear picture on stock price behavior. But the EBL and HBL cannot publish their current annual report on time. In the same way of research is to make study by adding additional years and the number of companies to get greater insight into the effect of share price on value. It means, in this report only five commercial banks are selected among 32 commercial banks and also five years data are taken to analysis the stock price behavior.

In this report, regression equation is presented on average value of selected banks. It is possible that regression equation is presented as separately. Not only EPS and DPS are independent value or variables, we may assume net worth per share and book value per share is also independent variable. We can use trend analysis also. Finally, it is recommended that in a world of market imperfection, the best policy is to view separately.

## **5.4 Recommendation**

Based on analysis of data, the following recommendations are made:

- ) Due to the non-randomness of the share price movement, either individual or institutional investor should be aware of the fact that above average return is possible to some extent from the past information.
- ) Since the random walk hypothesis is not accepted by NEPSE market, the rational investors should study the past trend and pattern of price series of the stock for prediction of future price change to make safe investment.
- ) It is recommended that investors should consult with the fundamentalists and technical analysts before the investment.
- ) The government should not only make policies for capital market development but also implement these policies timely and appropriately.
- ) The performances of commercial banks, finance companies and manufacturing & processing companies are better than the other sectors so it is recommended to the investors to invest their investment in these sectors.
- ) 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 information cheaply and widely. Its reliability is a must.
- ) The stock exchange should be investor 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 listed companies should disclose its financial statements timely and completely.

- ) The regulatory body should avoid negative rumors that may affect the price of stock. The behavior of stock price should be free and fair without any manipulation.
- ) The listed companies lack clear dividend policy and have fluctuating payout ratio.
- ) 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 stockbrokers and others concerned with the securities business should develop necessary expertise and the market intermediaries should have adequate infrastructure facilities to offer appropriate services to investors.
- ) Further research and in-depth analysis should be undertaken in regard to stock market efficiency by concerned regulatory body for the inputs to increase market activities and decrease manipulation.

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- Himalayan Bank Limited - [www.himalayanbank.com](http://www.himalayanbank.com)
- Laxmi Bank Limited - [www.Laxmibank.com](http://www.Laxmibank.com)
- Nepal Arab Bank Limited (Nabil) - [www.nabilbank.com](http://www.nabilbank.com)
- Nepal Investment Bank Limited - [www.nibl.com.np](http://www.nibl.com.np)
- Nepal Rastra Bank - [www.nrb.org.np](http://www.nrb.org.np)
- Nepal Stock Exchange Board - [www.nepalstock.com.np](http://www.nepalstock.com.np)

## APPENDIX- A

### Current Assets and Current Liabilities

**Table - I: Current Assets of Sample Banks (Rs. In Million)**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	6270.48	3070.68	5670.26	2339.92	2922.88
<b>2.NIB</b>	16810.16	25710.59	39310.78	8308.65	72150.33
<b>3.NABIL</b>	19710.69	29090.81	52290.80	47900.07	54280.43
<b>4.HBL</b>	35200.25	33660.23	41110.32	44390.20	52290.71
<b>5. EBL</b>	18260.27	17970.92	26140.06	33900.16	36560.50

**Table - II: Current Liabilities of Sample Banks (Rs. In Million)**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	12540.96	4515.71	7767.48	2108.04	2319.75
<b>2.NIB</b>	14491.52	19477.72	35415.12	48874.41	51906.71
<b>3.NABIL</b>	15520.23	20343.22	33095.44	38943.15	48035.78
<b>4.HBL</b>	25882.53	27366.04	33153.48	35798.55	38733.85
<b>5. EBL</b>	10616.44	14730.26	19954.24	34242.58	38083.85

**Table – III: Total Assets of Sample Banks (Rs. In Million)**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	5205	8583	12695	18386	20952
<b>2.NIB</b>	21330	27591	38873	53010	57305
<b>3.NABIL</b>	2233	2725	3713	4386	5208
<b>4.HBL</b>	2946	3352	3618	3933	4272
<b>5.EBL</b>	1596	2143	2715	3692	4138

**Table – IV: Net Profit of Sample Banks (Rs. In Million)**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1 LBL</b>	35.39	65.58	120.03	188.99	327.04
<b>2. NIB</b>	350.54	501.39	696.73	900.62	1265.95
<b>3. NABIL</b>	520.26	635.26	746.47	1031.05	1138.57
<b>4. HBL</b>	457.48	491.82	635.87	752.83	508.79
<b>5. EBL</b>	237.29	296.41	451.22	638.73	831.76

**Table - V: Book Value of Sample Banks**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	106	116	125	122	119
<b>2.NIB</b>	240	234	223	162	190
<b>3.NABIL</b>	381	418	354	324	265
<b>4.HBL</b>	229	265	248	257	227
<b>5. EBL</b>	218	281	322	345	332

**Table – VI : Shareholder’s Equity of Sample Banks (Rs. In Million)**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	704.44	917.80	919.38	1348.72	1933.60
<b>2.NIB</b>	1205.08	1461.38	2754.26	4064.39	4998.99
<b>3.NABIL</b>	1687.61	1908.47	2599.74	3187.43	3836.05
<b>4.HBL</b>	1922.76	2330.89	2609.83	3156.13	3575.78
<b>5.EBL</b>	1071.46	1332.07	2004.99	2286.07	2831.76

**Table - VII: Market price per share (MPS) of Sample Banks**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1.LBL</b>	368	690	1113	1062	570
<b>2.NIB</b>	1260	1729	2450	1388	705
<b>3.NABIL</b>	2240	5050	5275	4899	2384
<b>4.HBL</b>	1100	1740	1980	1760	816
<b>5.EBL</b>	1379	2430	3132	2455	1630

**Table – VIII: Earning per share (EPS) of Sample Banks**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1. LBL</b>	5.80	10.75	16.45	20.70	24.12
<b>2.NIB</b>	59.35	62.57	57.87	37.42	52.55
<b>3.NABIL</b>	129.21	137.08	108.31	106.76	78.61
<b>4.HBL</b>	59.24	60.66	62.74	61.90	31.80
<b>5. EBL</b>	62.78	78.42	91.82	99.99	100.16

**Table – IX: Dividend per share (DPS) of Sample Banks**

<b>Banks</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
<b>1. LBL</b>	-	-	21.05	5.26	13
<b>2.NIB</b>	55.46	30	40.83	20	25
<b>3.NABIL</b>	85	140	100	85	70
<b>4.HBL</b>	35	40	45	43.56	36.84
<b>5. EBL</b>	-	30	30	30	30

## APPENDIX B

### Correlation Co-efficient between EPS and MPS

#### 1. Laxmi Bank Limited

Year	EPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	5.80	-9.77	95.45	368	-392.60	15413.76	3835.70
2006/07	10.75	-4.82	23.23	690	-70.60	4984.36	340.29
2007/08	16.45	.88	.77	1113	352.40	124185.76	310.11
2008/09	20.70	5.13	26.32	1062	301.40	90841.96	1546.18
2009/10	24.12	8.55	73.10	570	-190.60	36328.36	-1629.63
	77.87		218.87	3803		180922.08	4402.65

#### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{77.87}{5} = 15.57$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{3803}{5} = 760.60$$

#### ii. Standard Deviation.

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{218.87}{5}} = 7.39$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{180922.08}{5}} = 212.67$$

#### iii. Correlation Co-efficient

$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2} \sqrt{\sum (Y - \bar{Y})^2}} = \frac{4402.65}{\sqrt{218.87} \sqrt{180922.08}} = 0.70$$

## 2. Nepal Investment Bank.

Year	EPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	59.35	5.4	29.16	1260	-246.4	60712.96	-1330.56
2006/07	62.57	8.62	74.30	1729	222.6	49550.76	1918.81
2007/08	57.87	3.92	15.36	2450	943.6	890380.96	3698.91
2008/09	37.42	-16.53	273.24	1388	-118.4	14018.56	1957.15
2009/10	52.55	-1.4	1.96	705	-801.40	642241.96	1121.96
	269.76		394.02	7532		1656905.2	7366.27

### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{269.76}{5} = 53.95$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{7532}{5} = 1506.40$$

### ii. Standard Deviation (S.D)

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{394.02}{5}} = 9.92$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{1656905.20}{5}} = 643.60$$

### iv. Correlation Coefficient.

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

$$= \frac{7366.27}{\sqrt{394.86} \sqrt{1656905.20}}$$

$$= \frac{7366.27}{19.85 \times 1287.20}$$

$$= \frac{7366.27}{25578.92}$$

$$= 0.28$$

## 2. NABIL

Year	EPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	129.21	17.22	296.53	2240	-1729.6	2991516.16	-29783.71
2006/07	137.08	25.09	629.51	5050	1080.4	1167264.16	27107.23
2007/08	108.31	-3.68	13.54	5275	1305.4	1704069.16	-4803.87
2008/09	106.76	-5.23	27.35	4899	929.4	863784.36	-4860.76
2009/10	78.61	-33.38	1114.22	2384	-1585.6	2514127.36	52927.33
	559.97		2081.15	19848		9240761.20	40586.22

### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{559.97}{5} = 111.99$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{19848}{5} = 3969.60$$

### ii. Standard Deviation. (S.D)

$$s_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{2081.15}{5}} = 22.81$$

$$s_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{9240761.20}{5}} = 1519.93$$

### iii. Correlation coefficient. (r)

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

$$= \frac{40586.22}{\sqrt{2081.15} \sqrt{9240761.20}}$$

$$= \frac{40586.22}{45.62 \times 33039.86}$$

$$= \frac{138982.65}{158,471.26}$$

$$= 0.29$$

#### 4. Himalayan Bank Limited

Year	EPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	59.24	3.97	15.76	1100	-379.20	143792.64	-1505.42
2006/07	60.66	5.39	29.05	1740	260.80	68016.64	1405.71
2007/08	62.74	7.47	55.80	1980	500.80	250800.64	3740.70
2008/09	61.90	6.63	43.95	1760	280.80	78848.64	1861.70
2009/10	31.80	-23.47	550.84	816	-663.20	439834.24	15565.30
	276.34		695.40	7396		981292.80	21068.27

##### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{276.34}{5} = 55.27$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{7396}{5} = 1479.20$$

##### ii. Standard Deviation (S.D)

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{695.40}{5}} = 13.18$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{981292.80}{5}} = 445.30$$

##### iii. Correlation Coefficient.

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

$$= \frac{21068.27}{\sqrt{695.40} \sqrt{981292.80}}$$

$$= \frac{21068.27}{26122.61}$$

$$= 0.81$$

### 5. Everest Bank Limited (EBL)

Year	EPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	62.78	-23.85	568.82	1379	-826.20	682606.44	19704.87
2006/07	78.42	-8.21	3667.40	2430	224.80	50535.04	-1845.61
2007/08	91.82	5.19	3626.94	3132	926.80	858958.24	4810.09
2008/09	99.99	13.36	36178.49	2455	249.80	62400.04	3337.33
2009/10	100.16	13.53	183.06	1630	-575.20	330855.04	-7782.45
	433.17		1024.71	11026		1985354.80	18224.23

#### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{433.17}{5} = 86.63$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{11026}{5} = 2205.20$$

#### ii. Standard Deviation (S.D)

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{1024.71}{5}} = 16$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{1985354.80}{5}} = 704.51$$

#### iii. Correlation coefficient.

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

$$= \frac{18224.23}{\sqrt{1024.71} \sqrt{1985354.80}}$$

$$= \frac{18224.23}{32.01 \times 1409.03} = 0.40$$

## APPENDIX- C

### Correlation coefficient between DPS and MPS

#### 1. Laxmi Bank Limited.

Year	DPS (X)	X- $\bar{X}$	(X- $\bar{X}$ ) <sup>2</sup>	MPS (Y)	Y- $\bar{Y}$	(Y- $\bar{Y}$ ) <sup>2</sup>	(X- $\bar{X}$ ) (Y- $\bar{Y}$ )
2005/06	-	-8.91	79.39	68	-392.60	154134.76	3498.07
2006/07	-	-8.91	79.39	690	-70.60	4984.36	629.05
2007/08	21.05	12.14	147.38	1113	352.40	124185.76	4278.14
2008/09	5.26	-3.65	13.32	1062	301.40	90841.96	-1100.11
2009/10	13	4.09	16.73	570	-190.60	36328.36	-779.55
	44.57		6.21	3803		410475.20	6525.60

#### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{44.57}{5} = 8.91$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{3803}{5} = 760.60$$

#### ii. Standard Deviation.

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{79.02}{5}} = 4.44$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{410475.20}{5}} = 320.34$$

#### iii. Correlation coefficient.

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

$$= \frac{6525.60}{\sqrt{336.21} \sqrt{410475.20}}$$

$$= \frac{6525.60}{18.34 \times 640.68}$$

$$= 0.56$$

## 2. Nepal Investment Bank.

Year	DPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	55.46	21.20	449.44	1260	-246.40	60712.96	-5223.68
2006/07	30	-4.26	18.14	1729	222.60	49559.76	-948.27
2007/08	40.83	6.57	43.16	2450	943.60	890380.96	6199.45
2008/09	20	-14.26	203.34	1388	-118.40	14018.56	1688.39
2009/10	25	-9.26	85.74	705	-801.40	642241.96	7420.96
	171.29		799.82	7532		1656905.20	9136.85

### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{171.29}{5} = 34.26$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{7532}{5} = 1506.40$$

### ii. Standard Deviation.

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{799.82}{5}} = 14.14$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{1656905.20}{5}} = 643.60$$

### iii. Correlation coefficient.

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

$$= \frac{9136.85}{\sqrt{799.82} \sqrt{1656905.20}}$$

$$= 0.26$$

### 3. NABIL

Year	DPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	85	-11	121	2240	-1729.60	2991516.16	19025.60
2006/07	140	44	1936	5050	1080.40	1167264.16	47537.60
2007/08	100	4	16	5275	1305.40	1704069.16	5221.60
2008/09	85	-11	121	4899	929.40	863784.36	-10223.40
2009/10	70	-26	676	2384	-1585.60	2514127.36	41225.60
	480		2870	19848		9240761.20	102787

#### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{480}{5} = 96$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{19848}{5} = 3969.60$$

#### ii. Standard Deviation.

$$s_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{2870}{5}} = 26.79$$

$$s_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{9240761.20}{5}} = 1519.93$$

#### iii. Correlation coefficient.

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

$$= \frac{102787}{\sqrt{2870} \sqrt{9240761.20}}$$

$$= 0.63$$

#### 4.Himalayan Bank Ltd.

Year	DPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06	35	-5.08	25.81	1100	-379.20	143792.64	1926.34
2006/07	40	-0.08	6.4	1740	260.80	68016.64	-20.86
2007/08	45	4.92	24.21	1980	500.80	250800.64	2463.94
2008/09	43.56	3.48	12.11	1760	280.80	78848.64	977.18
2009/10	36.84	-3.24	10.49	816	-663.20	439834.24	-2148.77
	280.40		79.02	7396		981292.80	3197.83

#### ii. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{280.40}{5} = 40.08$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{7396}{5} = 1479.20$$

#### ii. Standard Deviation.

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{79.02}{5}} = 4.44$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{981292.80}{5}} = 495.30$$

#### iii. Correlation coefficient.

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

$$= \frac{3197.83}{\sqrt{79.02} \sqrt{981292.80}}$$

$$= \frac{3197.83}{8.89 \times 990.60}$$

$$= 0.36$$

## 5. Everest Bank Limited

Year	DPS (X)	$X - \bar{X}$	$(X - \bar{X})^2$	MPS (Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2005/06		-24	567	1379	-826.20	68260.44	19828.80
2006/07	30	6	36	2430	224.80	50535.04	1348.80
2007/08	30	6	36	3132	926.80	858958.24	5560.80
2008/09	30	6	36	2455	249.80	62400.04	1498.80
2009/10	30	6	36	1630	-575.20	330855.04	-3451.20
	120		720	11026		1985354.80	24786

### i. Mean

$$\bar{X} = \frac{\sum X}{N} = \frac{120}{5} = 24$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{11026}{5} = 2205.20$$

### ii. Standard Deviation.

$$\sigma_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{720}{5}} = 13.42$$

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{1985354.80}{5}} = 704.51$$

### iii. Correlation coefficient.

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

$$= \frac{24786}{\sqrt{720} \sqrt{1985354.80}}$$

$$= 0.65$$

## APPENDIX- D

### A survey on stock market in Nepal

Name:

Please use tick mark (✓) in an alternative.

1. Have you invested in any securities?
  - a. Yes    ()    b. No.        ()
2. How did you first get the idea about securities investment?
  - a. From friends            ()
  - b. From stock holders    ()
  - c. From relatives        ()
  - d. Myself                ()
3. What do you consider before investing in securities?
  - a. Return only            ()
  - b. Risk only              ()
  - c. Risk and return        ()
  - d. I don't know        ()
4. Do you know some portion of total risk can be diversified by portfolio investment?
  - a. Yes    ()    b. No.        ()
5. What type of share should buy from securities market?
  - a. undervalued            ()
  - b. Overvalued            ()
  - c. I don't know        ()
6. In which sector's share do you like to invest most?
  - a. Banking
  - b. Insurance
  - c. Development banks
  - d. Finance companies
  - e. Hotels
  - f. Manufacturing and processing
  - g. Trading
  - h. Others
7. Are you satisfied with the return that you are presently getting from share investment?

- a. Yes       b. No

8. Are you satisfied with government efforts to develop stock market in Nepal?

- a. Yes       b. No

If no, please provide three good suggestions in short

.....  
.....  
.....

9. In your opinion, which is the main cause for Nepalese people to be reluctant to invest in securities?

- a. Lower return
- b. More risky
- c. Lack of knowledge
- d. No protection of investor's right

10. How is your annual income level?

- a. below 40000
- b. Above 40000-80000
- c. Above 80000-120000
- d. Above 120000

11. For what purpose do you want to invest?

- a. Dividend
- b. Management participant
- c. Capital gain
- d. Social status

12. In your opinion which of the following is most responsible for NEPSE performance?

- a. Government
- b. Investors
- c. Brokers
- d. NEPSE

## APPENDIX –E

### Regression Equation of Y (MPS) on X (EPS)

#### Regression equation of Y (MPS) on X (EPS)

Dependent Variables(MPS)	Independent Variables(EPS)	XY	X <sup>2</sup>
760.60	15.56	11834.94	256
1506.40	53.95	81270.28	2916
3969.60	111.99	444555.50	12544
1479.20	55.27	81755.38	3025
2205.20	86.63	191036.48	7569
<b>9921</b>	<b>323.40</b>	<b>810452.58</b>	<b>26310</b>

#### Regression equation of Y (MPS) on X (DPS)

Dependent Variables(MPS)	Independent Variables(DPS)	XY	X <sup>2</sup>
760.60	8	6084.80	64
1506.40	34	51217.60	1156
3969.60	96	381081.60	9216
1479.20	40	59168	1600
2205.20	24	52924.80	576
<b>9921</b>	<b>202</b>	<b>550476.80</b>	<b>12612</b>

#### Regression equation of MPS(Y) on EPS(X1) and DPS (X2)

Dependent Y	Independent		X <sub>1</sub> <sup>2</sup>	X <sub>2</sub> <sup>2</sup>	X <sub>1</sub> X <sub>2</sub>	YX <sub>1</sub>	YX <sub>2</sub>	Y <sup>2</sup>
	X <sub>1</sub>	X <sub>2</sub>						
760.60	15.56	8	242.11	64	124.48	11834.94	6084.80	578512.36
1506.40	53.95	34	2910.60	1156	1834.30	81270.28	51217.60	2269240.96
3969.60	111.99	96	12541.76	9216	10751.04	444555.50	381081.60	15757724.16
1479.20	55.27	40	3054.77	1600	2210.80	81755.38	59168	2188032.64
2205.20	86.63	24	7504.75	576	2079.12	191036.48	52924.80	4862907.04
<b>9921</b>	<b>323.40</b>	<b>202</b>	<b>26253.99</b>	<b>12612</b>	<b>16999.74</b>	<b>810452.58</b>	<b>550476.80</b>	<b>25656417.16</b>

## APPENDIX- F

### Hypothesis-1-Chi-square test

R, C	$\zeta$	$E = \frac{RT \times CT}{N}$	$(\zeta Z\eta)$	$(\zeta Z\eta)^2$	$\frac{(O - E)^2}{E}$
1,1	10	7.93	2.07	4.28	.04
1,2	6	5.67	.33	.1089	0.019
1,3	20	21.53	-1.53	2.34	0.108
1,4	15	15.86	-.86	.7396	0.046
2,1	4	6.07	-2.07	4.2849	0.706
2,2	4	4.33	-.33	.1089	0.025
2,3	18	16.47	1.53	2.3409	0.1421
2,4	13	12.13	.87	.7569	0.0623
Total					1.6484

Formula :  $\chi^2 = \sum \left[ \frac{(O - E)^2}{E} \right] = 1.6484$

Degree of freedom (d.f.) = (R-1) (C-1)  
 = (2-1) (4-1)  
 = 1 | 3  
 = 3

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

## Hypothesis-2

### Chi-square test

R, C	$\zeta$	$E = \frac{RT \times CT}{N}$	$(\zeta Z\eta 1)$	$(\zeta Z\eta)^2$	$\frac{(O - E)^2}{E}$
1,1	46	43.82	2.18	4.7524	.1084
1,2	12	14.18	-2.18	4.7524	.3351
2,1	22	24.18	-2.18	4.7524	.1965
2,2	10	7.82	2.18	4.7524	.6077
Total					$\Sigma \left[ \frac{(O - E)^2}{E} \right] = 1.2477$

Formula :  $\chi^2 = \Sigma \left[ \frac{(O - E)^2}{E} \right] = 1.2477$

Degree of freedom (d.f.) = (R-1) (C-1)

$$= (2-1) (2-1)$$

$$= 1 \mid 1$$

$$= 1$$

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

### Hypothesis-3

#### Chi-square test

R, C	$\zeta$	$E = \frac{RT \times CT}{N}$	$(\zeta Z\eta)$	$(\zeta Z\eta)^2$	$\frac{(O - E)^2}{E}$
1,1	20	30	-10	100	3.3333
1,2	34	24	10	100	4.167
2,1	30	20	10	100	5
2,2	6	16	-10	100	6.25
Total					18.7503

Formula :  $\chi^2 = \sum \left[ \frac{(O - E)^2}{E} \right] = 18.7503$

75

Degree of freedom (d.f.) = (R-1) (C-1)

$$= (2-1) (2-1)$$

$$= 1 \mid 1$$

$$= 1$$

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

## Hypothesis-4

### Chi-square test

R, C	$\zeta$	$E = \frac{RT \times CT}{N}$	$(\zeta Z\eta)$	$(\zeta Z\eta)^2$	$\frac{(O - E)^2}{E}$
1,1	15	18.35	-3.35	11.2225	.6115
1,2	12	11.80	0.2	0.04	.00338
1,3	32	28.84	3.16	9.9856	.3462
2,1	13	9.64	3.36	11.2896	1.17
2,2	6	6.2	.20	0.04	0.006452
2,3	12	15.15	-3.15	9.9225	.6549
Total					2.7859

Formula :  $\chi^2 = \sum \left[ \frac{(O - E)^2}{E} \right] = 2.7859$

Degree of freedom (d.f.) = (R-1) (C-1)

$$= (2-1) (3-1)$$

$$= 1 \times 2$$

$$= 2$$

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

## **APPENDIX G**

### **Brief Introduction of the Banks under study**

This section contains general introduction of the banks under study for the easy reference of the sample to the research which is supposed to be useful in the proper understanding and its inferences.

#### **A) Laxmi Bank Ltd.**

Laxmi Bank Ltd was established On 27<sup>th</sup> sep 2001, with the share capital of 55% of the local promoters, 35% of general public and 10% of Nepal nagarik kos. however, the bank initiated its operation only from 3<sup>rd</sup> of April 2002

#### **B) Nepal Investment Bank Ltd.**

Nepal Investment Bank Ltd. is third joint venture bank, incorporated in 1986 AD under the company act. The bank is managed by Banque Indosuez, Paris till now in accordance with joint venture and technical services agreement signed between the bank and Nepalese promoters.

#### **C) Nabil Bank Ltd.**

Nabil Bank Ltd. is the first joint venture commercial bank incorporate in 1984 A.D in Nepal. Initially Dubai Bank Ltd. (DBL) invested 50% of equity shares of Nabil Bank Limited.. The listing date of Nabil Bank Ltd. in stock exchange was Mangsir 9, 2042 B.S (1986). It is delivering its services through 49 branches in different cities of Nepal currently.

#### **D) Himalayan Bank ltd.**

Himalayan Bank ltd was established on 18<sup>th</sup> jan.1993 with Habib Bank of Pakistan's shareholding of 20% and Nepalese promoter's 80%.

### **E) Everest Bank Ltd.**

Everest Bank Limited was established in 1994, under the company act. It is also a foreign joint venture bank and the foreign partner was United of Bank Ltd. and was managed from the very beginning till November 1996. Later on it handed over the management to Punjab national Bank Ltd., India that holds 20% equity on the bank's share capital. The listing date was Chaitra 25, 2052(1995). It is providing its services through 29 branches in different places of Nepal.