

**A STUDY OF DIVIDEND POLICY AND ITS IMPACT ON
MARKET PRICE OF STOCK**

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RECOMMENDATION

This is to certify that the thesis

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Entitled:

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MARKET PRICE OF STOCK**

*has been prepared as approved by this Department in the prescribed format of the
Faculty of Management. This thesis is forwarded for examination.*

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VIVA-VOCE SHEET

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And found the thesis to be the 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 the degree of **Master of Business Studies (MBS)**

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DECLARATION

I hereby declare that the work reported in this thesis entitled “**A Study of Dividend Policy and its Impact on Market Price of Stock**” submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of Asso. prof. Ruchila Pandey and Lalu Prasad Aryal of Shanker Dev Campus.

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TABLE OF CONTENTS

Recommendation	
Viva-Voce Sheet	
Declaration	
Acknowledgement	
Table of Contents	
List of Tables	
List of Figures	
Abbreviations	

CHAPTER I: INTRODUCTION	1-7
1.1. General Background of the Study	1
1.2. Statement of the Problems	4
1.3. Objectives of the Study	5
1.4. Significance of the Study	5
1.5. Limitations of the Study	6
1.6. Organization of the Study	7
CHAPTER II: REVIEW OF LITERATURE	8-40
2.1 Conceptual Framework	8
2.1.1 Forms of Dividend	10
2.1.2 Types of Dividend Policy	12
2.1.3 Dividend Payment Procedure	14
2.1.3 Stock Split and Reverse Split	14
2.1.4 Stocks Repurchase	15
2.1.5 Factors Affecting Dividend Policy	16
2.2 Review of Major International Studies	19
2.3 Review of Journals and Articles	27
2.4 Review of Previous Thesis	29
2.5 Research Gap	35

CHAPTER III: RESEARCH METHODOLOGY	37-47
3.1 Research Design	37
3.2 Population and Sample Selection	38
3.3 Nature and Sources of Data	38
3.4 Data Processing Techniques	38
3.5 Tools of Analysis	39
3.5.1 Financial Tools	39
3.5.2 Statistical Tools	42
CHAPTER IV: DATA PRESENTATION AND ANALYSIS	48-79
4.1 Presentation and Analysis of Secondary Data	48
4.1.1 Market Price per Share	48
4.1.2 Earning Per Share	50
4.1.3 Dividend per Share	51
4.1.4 Dividend Payout Ratio	53
4.1.5 Dividend Yield	55
4.1.6 Earning Yield	57
4.1.7 Price Earnings Ratio	58
4.1.8 Correlation Analysis	60
4.1.9 Regression Analysis	63
4.1.10 Trend Analysis	66
4.2 Presentation and Analysis of Primary Data	71
4.3 Major Findings of the Study	78
CHAPTER V: SUMMARY, CONCLUSION & RECOMMENDATION	80-84
5.1 Summary	80
5.2 Conclusions	81
5.3 Recommendations	83
Bibliography	
Appendix	

LIST OF TABLES

Table No.	Title	Page No.
Table 4.1	Analysis of Market Price per Share	48
Table 4.2	Analysis of Earnings Per Share	50
Table 4.3	Analysis of Dividend Per Share	52
Table 4.4	Analysis of Dividend Payout Ratio	53
Table 4.5	Analysis of Dividend Yield	55
Table 4.6	Analysis of Earning Yield	57
Table 4.7	Analysis of Price Earnings Ratio	58
Table 4.8	Correlation Coefficient between EPS and MPS	60
Table 4.9	Correlation Coefficient between DPS and MPS	61
Table 4.10	Correlation Coefficient between EPS and DPS	62
Table 4.11	Regression Analysis between EPS and MPS	64
Table 4.12	Regression Analysis between DPS and MPS	64
Table 4.13	Regression Analysis between EPS and DPS	65
Table 4.14	Trend Analysis of MPS	66
Table 4.15	Trend Analysis of EPS	67
Table 4.16	Trend Analysis of DPS	69
Table 4.17	Trend Analysis of DPR	70
Table 4.18	Preference of Dividend option	71
Table 4.19	Factors Considered by the Investors	72
Table 4.20	Factors to be Considered While Adopting Dividend Policy	73
Table 4.21	Reasons for Investing in Share Capital	74
Table 4.22	Suggestion if there is no Cash to Pay Dividend	74
Table 4.23	Dividend Practices Followed by Bank	75
Table 4.24	Major Motives of Cash Dividend	76
Table 4.25	Effect of Dividend Policy on MPS	77

LIST OF FIGURES

Table No.	Title	Page No.
Table 4.1	Analysis of Market Price per Share	49
Table 4.2	Analysis of Earnings per Share	51
Table 4.3	Analysis of Dividend per Share	53
Table 4.4	Analysis of Dividend Payout Ratio	54
Table 4.5	Analysis of Dividend Yield	56
Table 4.6	Analysis of Earning Yield	58
Table 4.7	Analysis of Price Earnings Ratio	59
Table 4.8	Trend Analysis of MPS	67
Table 4.9	Trend Analysis of EPS	68
Table 4.10	Trend Analysis of DPS	69
Table 4.11	Trend Analysis of DPR	70
Table 4.12	Preference of Dividend Option	71
Table 4.13	Factors Considered by the Investors	72
Table 4.14	Factors to be Considered While Adopting Dividend Policy	73
Table 4.15	Reasons for Investing in Share Capital	74
Table 4.16	Suggestion if there is no Cash to Pay Dividend	75
Table 4.17	Dividend Practices Followed by Bank	76
Table 4.18	Major Motives of Cash Dividend	77
Table 4.19	Effect of Dividend Policy on MPS	78

ABBREVIATIONS

BOK	:	Bank of Kathmandu Limited
CB	:	Commercial Bank
CV	:	Coefficient of Variation
DPR	:	Dividend Payout Ratio
DPS	:	Dividend per Share
DY	:	Dividend Yield
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
EY	:	Earning Yield
Ltd.	:	Limited
MPS	:	Market Price per Share
NEPSE	:	Nepal Stock Exchange
NIBL	:	Nepal Investment Bank Ltd.
NRB	:	Nepal Rasta Bank
NSBL	:	Nepal SBI Bank Limited
P.E.	:	Probable Error
P/E Ratio	:	Price Earnings Ratio
r	:	Correlation Coefficient
SD	:	Standard Deviation
SDPS	:	Stock Dividend per Share
SEBON	:	Securities Board of Nepal

CHAPTER- I

INTRODUCTION

1.1 General Background of the Study

Companies that earn a profit can decide either of three ways: i) pay that profit out to the shareholders, ii) reinvest it in the business through expansion, iii) debt reduction or share purchase or both. When a portion of the profit is paid out to the shareholders, the payment is known as dividend. Dividends are paid in either Cash or stock.

There is an ongoing debate about whether a company should pay out its earnings as dividend or retain them for firm growth. There is further debate about which policy investors prefer. Firms that are growing generally pay low or no dividends. Mature firms that are no longer in a growth phase often pay high and increasing dividends. (*Thapa and Gautam; 2011:334*)

The dividend decision is regard as a financing decision since any cash dividend paid reduces the amount of cash available for investment by the firm. Dividends are periodic cash payments by the company to its shareholders. The dividend payable to the preference shareholders is usually fixed by the terms of the issue of preference shares. But the dividend on equity shares is payable at the discretion of the Board of Directors of the company. For payment of dividends, a company must earn distributable profits from which the actual payments of dividend will be made. A company in general meeting may declare dividends, but no dividend shall exceed the amount of recommended by the Board. The shareholders have no right to declare more dividend than what has been recommended by the Board of directors. (*Karki; 2006:24*)

Management may decide retaining earnings as opposed to paid out as dividends. The process of paying remaining amount after reinvesting from retained earnings to shareholders is called dividend policy. Dividend policy involves the decision to pay out earning versus retaining them for reinvestment in the firm. Any change in dividend policy has both favorable and unfavorable effects on the firm's stock price. Higher the dividends means higher the immediate cash flows to investors, which is

good, but lower future growth, which is bad. The dividend policy should be optimal which balances the opposing forces and maximizes stock price. (*Thapa and Gautam; 2011:335*)

Management should try to maintain regular dividend. To provide a regular dividend, the firm will have sufficient earnings. Management may also declared extra dividend in years when earnings are high and funds are available. Shareholders have different desires. Shareholders may be interested either in dividend incomes or capital gains. Wealthy shareholder in a high income tax bracket may be interested in capital gains as against current dividends. A retired and old person, whose source of income is dividend, would like to get a regular dividend. (*Ghimire; 2002:292*)

People invest their hard money for satisfactory and expected return. To these objectives, firms distribute the earning to their shareholders. Earning is that amount which remains after deducting or submitting all operational and non-operational expenses. Stockholders' expectations may vary with their investment priorities, even though. Some participates in capital market in order to have some dividend as return whereas some hope for capital appreciation of stocks. In fact primary intention in investing share is to earn as dividend but in Nepalese context people are interested in investing with keeping the views and expectation of more capital appreciation of stocks, but that is secondary expectation, theoretically. (*Van Horne; 2000:339*)

The main focus of investors however is the dividend. But there is not any consistency and regular practice of dividend announcement in different firms. They are exactly different as per their dividend policies. Similarly in the secondary market the declaration of the dividend or the dividend policy of the firm changes the market price of the shares. Therefore it is expected that there is some impact of dividend policy over the market price of the stock. (*Walter; 1996:342*)

Dividend policy is the major decision of the firm. Mostly, dividend is paid in cash to its shareholders. Dividend payment reduces the total amount of internal financing. Consequently, it must be considered in relation to the overall financial decision. "A commercial bank is a dealer of money and substitute for money, such as check or a

bill of exchange. It also provides a variety of financial services."(*The Encyclopedia of Britannic; 1985: 600*)

"By a dividend policy, we mean some kind of consistent approach to the distribution versus retention decision rather than making the decision on purely ad - hoc basis from period to period."(*Pearson, Charles and Gordon; 1972:405*)

Market price of the stock is the trading price of the stock listed in authorized or legal stock exchanges. In context of Nepal, MPS is the price that is coated for purchasing or selling under Nepal Stock Exchange Act or related laws and regulations, on the stock exchange floor. MPS is that value of stock, which can be obtained by a firm from the market. Market value of a share is one of the variables, which is affected by the dividend per share and earnings per share of the firm. If the earning per share and dividend per share is high, the market value per share will also be high. Market values of the share may be high or low than the book values. If the firm is growing concern and it's earning power is greater than cost of capital, the market value of the share will be higher than the book value. If the firm's earning capacity is lower than the cost of capital MPS will also be lower. MPS determined by capital market. (*Karki; 2006:209*)

Market price of the stock usually fluctuates by the adequate information. No one can earn more in the inefficiency and inefficiency is legally prohibited in order to regulate the security market in every nation. But being focused in this study, dividend policy and its impact on market price of stock, there should be discussed different models and practices which have significant effects in MPS or not. So MPS and security valuation are integral parts in it. Without valuation no one can coat the price without price there is no chance of trading. (*Van Horne; 2000:211*)

Every day in newspaper one can see the market price of the different shares of different companies. The trading of the share definitely requires the MPS, which can be obtained by the stock valuation. Share valuation in an economic progress generates rational securities prices. Although the price fluctuations may appear to be chaotic, they are random fluctuations that result from the random arrival of the new information.

Dividend policy and MPS has always correlation; if the company pays high dividend the MPS increases and vice-versa. But in some cases out of this interrelation, the price may remain constant or decrease too. Therefore, the information lack or flow is also vital in the analysis of MPS.

1.2 Statement of the Problems

Generally, people are investing their money in the common stocks. Some investors are being more rational towards the investment process. They are studying background, past history and performance of the organization, market demand of the stock, dividend policy undertaken by the organization etc. before investing their money. But still more investors are investing without knowing the basic concept and process of the investment. Most of the investors are not aware of the risk involved in investing on such securities. Investors should be aware of the policies and decisions taken by the company management towards wealth or profit maximization.

Different financial experts have introduces the dividend payment models which present their view towards dividend payment. Among them, MM model tells that dividends are irrelevant to the value of the firm. It believes that earnings should be retained only for getting benefit from investment opportunities. If there is no investment opportunity, all the earnings should be distributed as dividend. (*Modigliani & Miller 1961: 89*)

The dividend policy of the firm affects the value of the shares. His model supports that dividends are relevant. He argues that the choice of dividend polices almost affect the value of an enterprise. The Investment policy of a firm cannot be separated from its dividend policies. According to him, both are interlinked which is just opposite to Modigliani and Miller approach. Walter's model shows clearly the importance of the relationship between the return on a firm's investment or its internal rate of return (r) and its cost of capital or the required rate of return (k) in determining the dividend policy. As long as the internal rate greater than the cost of capital, the share price will be enhanced by retention and will vary inversely with dividend payment. In this way Walter's model's is also known as "Optimal Theory of Dividend". (*Walter, 1966: 76*)

In general, the dividend policy will affect the stock price in market. If the dividend policy is shareholder oriented, then the market price of the stock will increase. It's

because people want to invest in those stocks, which give more return. But some scholars and experts do not agree with this relationship of dividend and market price of stock. Therefore the main focus of this study is to deal with the following problems so far it will be possible to cope with:

- Are the banks able to pay return to its shareholders?
- What is the impact of dividend policy on the market price of the stock?
- Is there any uniformity between the firms in regards to financial indicators and variables?
- What are the reasons behind stock price increasing after the announcement of dividend?

1.3 Objectives of the Study

The main threat to the commercial banks of Nepal is to earn sufficient profit to ensure the reasonable dividend to their stockholders. The aim of the study is basically to analyze and evaluate the application of dividend decision in the selected banks and the study focus on the prevalent dividend policies. Besides that, the specific objectives of the study are as follows:

- To examine the returns of the commercial banks to its investors.
- To analyze the relationship between dividends per share (DPS), earning per share (EPS) and market per share (MPS).
- To identify the impact of dividend policy on market price of stock.
- To examine the forecasted MPS, EPS, DPS and DPR of the selected commercial banks.

1.4 Significance of the Study

Getting more return from the limited source of investment is the essential part for every investor while they seek to invest in different sector on portfolio. Nowadays, people are very much attracted towards investment in share for the purpose of getting higher return. So dividend policy has become an effective way for attracting the large number of new investors, retain present investors and to maintain goodwill and the desired controlling position of the firm. Despite investor's high expectation, there are almost none of the firms adopting clear dividend policy in

Nepal. Therefore this study of the dividend policy of the selected commercial banks in Nepal may be rewarding.

The study is not only helpful to the researcher but the final outcome of the study will prove to be a valuable tool for various concerned groups like shareholders, banks, finance companies etc. The shareholders will be able to know whether the dividend policy of the company where they invested their money is relevant or not. They will also be able to know the position of the company in the financial market. The banks & finance companies will know the dividend practices followed by other banks. They will also be able to compare their own dividend practices with those of the banks chosen and find out whether they need to improve their dividend policy or not. This research will also be useful to management to point out the loopholes and suggest the remedies about the appropriate dividend policy and also for and also for stock brokers, financial agencies, policy makers and other interested person.

It may be useful to government as well for policy making, controlling, supervision and monitoring. Furthermore, students will be able to study about dividend policy and will be helpful as they can take it as reference if they are doing the research in the similar topics. As mentioned above, researchers can use it as a reference for their research.

1.5 Limitations of the Study

There are limitations that weaken the generalizations – e.g. inadequate coverage of industries, time constraint, reliability of statistical tools used and other variables. This study is simply for partial fulfillment of the requirement of the Master in Business Studies (M.B.S.). So this study will be limited by the following factors.

- The study is mainly conducted on the secondary data. So the result depends on the reliability of secondary data. However primary data is also used to analyze the impact of dividend policies on market price of stock.
- The study covers a period of five years.

- There are many factors that affect dividend decisions and valuation of the firm. However, only that factor s related with dividend will be considered in the study.
- Only four commercial banks are taken as sample due to lack of time.

1.6 Organization of the Study

This study will be divided into five chapters as follows:

Chapter One deals with the subject matter of the study. The outline of the research is presented in the chapter. The whole research will be based on the introduction chapter. It deals with general background of the study, statement of the problems, objectives of the study, significance of the study, limitations of the study and organization of the study.

Chapter Two deals with the review of literature. It includes a discussion on the conceptual framework on dividend policy. It also includes review of various studies (i.e. various books, journals & articles, masters degree thesis etc) related with dividend decision. It also includes major studies relating with dividend decision.

Chapter Three explains the Research methodology used to evaluate dividend practices of commercial banks in Nepal. It consists of research design, source of data, population and sample statistical tools and financial tools and it also includes limitation of the study.

Chapter Four is the main part of the study which fulfills the objective of the study by presenting data and analyzing them with the help of various statistical tools as per methodology. In this chapter, descriptive analysis of the gathered data and information using statistical as well as financial tools is carried out. In this chapter, major findings of the study have been conducted based on primary and secondary data.

Chapter Five includes the major findings and conclusion of the study. This chapter deals with the summary and conclusion of the study and gives recommendations for improvement in the dividend behavior of the listed banks.

CHAPTER - II

REVIEW OF LITERATURE

Literature review is a “stock taking” of available literature in one’s field of research. Review of literature is an important part of any research work. It provides the boundary line for any research. Previous studies provide the foundation for present study. So, previous studies cannot be ignored. There must be continuity in research. This continuity in research is insured by linking the present study with past research studies. From this, it is clear that the purpose of literature review is to find out what research studies have been conducted in one’s chosen field of study and what remains to be done.

The review of literature is a crucial aspect because it denotes planning of the study. The main purpose of literature review is to find out what works have been done in the area of the research problem under study and what has been done in the field of the research study being undertaken. For review study, the researcher uses different books, reports, journals and research studies published by various institutions, unpublished dissertations submitted by master level students.

2.1 Conceptual Framework

Dividend decision is not only important for the shareholders but also firm's internal growth. Dividends are desirable from shareholders point of view as it help to increase their current worth. It is desirable from company's point of view too, as it will help growth of firm. The dividend policy determines the amount of earning to be distributed to shareholders and to reinvest in the firm. Dividend is a portion of earnings which is distributed to shareholders in return of their investment in share capital. The dividend policy affects the overall financing decisions of the firm. Dividend implies to the portion of earning that is paid to the shareholders while dividend policy refers to the guidelines that management uses in establishing portion of retained earning that is paid to the shareholders in the form of dividend. Dividend policy covers two portion bonus share issue and cash dividends.

Bonus share refers to free share stock that are extended to the current shareholders of a company, without need for the shareholders actually purchase the additional shares. An issue of bonus share represents distribution of shares in addition to the cash dividend to the existing shareholders. This has the effects of increasing the number of outstanding share of the company. The declaration of bonus share will increase the paid up share capital and reduce the reserve and surplus of the company (*Pandey, 1999; 706*). The total net worth is not affected by bonus issue.

When company need to expansion to its business then bonus issue is useful for corporate firms. Bonus issue control company's cash flow. Bonus issue is the source of reinvestment corporate firms. The issue bonus share does not affect the wealth of shareholders. The earnings per share and market price per share will fall proportionately to the bonus issue. Dividend policy affects long term effects on corporate firms. If the firm increases the retained earnings, shareholders dividend decreases and the market price of the share is increases. Thus the dividend decision is always matter of dispute. (*Pandey, 1992; 296*)

It may emphases here that the market value of the share may improve as a result of the bonus issue if it is followed by increased dividends in the immediate future. If the dividends do not increase, it is likely that the market price may fall. A stock dividend is paid in additional shares of stock instead of cash, and simply involves the transfer of earned surplus to the capital stock account (*Gitman; 2001: 286*)

Dividend policy is concerned with determining the proportion of firm's earnings to be distributed in the form of cash dividend and the proportion of earnings to be retained. Dividend policy is yet crucial area of financial management. Dividend policy involves the decision to pay out earning versus retaining them for reinvestment in the firm. Any change in dividend policy has both favorable and unfavorable effects of the firm's stock price. Higher the dividend means higher the immediate cash flow to investor which is good. In the other hand lower future growth. The dividend policy should be balanced opposing forces and maximize price. (*Thapa and Gautam, 2011; 330*)

The purpose of bonus share issue is maintaining management control existing shareholders. Bonus share issue minimizes flotation cost. It protects the existing shareholders from dilution of their wealth position and increase the share capital.

Dividend policy can be defined as percentage of dividend which maximizes the wealth of the share holders in long term. Dividend policy becomes a problem especially on the public limited companies. A firm's dividend policy has a effects of dividing in net profit in to two parts one is retained earnings and dividend. Dividend also divided into two parts i.e. bonus issue and cash dividend. (*Shrestha; 1980:79*)

Bonus share announcement is one of the important decisions of the financial management. Before determine issue of bonus Share Company must study its impact on earnings per share and stock price. Bonus share is one type of dividend forms. Bonus share may be issued in addition to cash dividend. Issue of bonus share conserves cash where as cash dividend flow out the cash. (*Shrestha; 1981:96*)

Dividend policy is a financial decision which affects the shareholders value maximization and immediate purpose. Dividend in fact is the portion of the net earnings, which is distributed to shareholders by a company. After successfully completing the business activities of a company, if its financial statement shows the net profit, the board of directors decides to declare dividend to stockholders. Therefore the payment of corporate dividend is at the decision of board of directors. (*Thapa and Gautam; 2011:396*)

2.1.1 Forms of Dividend

According to changing needs of corporate firms, dividend can be distributed in several forms. A corporation according to its policies objectives and situation distribute different kinds of dividend to its stockholders. The type of dividend that corporation follow is partly of matter of attitude of directors and partly relevant economic and financial factor. Dividend refers to the distributed earning to the ordinary shareholders of the firm in return to their investment. Normally, A investor expect to have return on his/her investment in the forms of dividend and capital gain. Shareholders are the residual claimer to the earning of the company. Directors must

retain some earnings, whether or not profitable investment opportunities exist, to maintain the company as a sound and solvent enterprises.

Thus depending on the needs to finance their investment opportunities, companies may follow different dividend policies. Mature companies that have few investment opportunities may generally have high payout ratios. Shareholders of such companies would be more interested in dividends, as they obtain return on their investments, than the company. The share price of such companies is very sensitive to dividend changes. On the other hand, growth companies may have low payout ratios. Sometimes, the growth company retains most of its earning and declare bonus share to satisfy the dividend requirements of shareholders. (*Gitman; 2001:374*)

It is clear that the corporation distribute different types of dividend to its shareholders on the return of their investment. On the concentration of firm's policies objectives and circumstances the following types of dividends are provided:

Cash Dividend

A cash dividend is the dividend, which is distributed to the shareholders in cash, out of earnings of the company. When a cash dividend is distributed both total assets and net worth of the company decrease as cash and earnings decreases. The market price of share drops in most cases by the amount of the cash dividend distributed. Most company pay cash dividend in sufficient liquidity conditions. (*Van Horne; 1993:674*)

Stock Dividends

A stock dividend occurs when the board of directors authorizes a distribution of common stock of existing shareholders. Stock dividend increases the number of outstanding shares of the firm's stock. Stock dividend requires an accounting entry transfer from the retained earnings account to the common stock and paid in capital accounts. There is no cash involve in stock divided. Net worth remains unchanged, and the number of shares is increased. (*Srivastava; 2001:281*)

Interim Dividend

Generally dividend is declared in the last of the financial year. This is called regular dividend. Many times directors can declare the dividend before the end of the financial years. This is called interim dividend. (*Pandey; 1982:298*)

Property Dividend

Instead of cash dividend can be given in the form of property. Whenever, the assets which are not used in the operation of the business or in extraordinary circumstances distribute to the shareholders who are the actual owners of the company. (*Van Horne; 2000:173*)

Bond Dividend

Company can distribute its own bond to the shareholders on the name of bond dividend. It helps the company to postpone the payment of cash. (*Sharma; 2001:277*)

2.1.2 Types of Dividend Policy

The dividend amount paid out of profit, both from past and present, is guided by the dividend Policy, the firm follows. Generally, dividend Policy can be categorized as conservative, liberal, moderate and progressive dividend Policy. Whatever the dividend Policy followed by corporate firm, it is the concept that resolves the apparent conflict by finding optimal dividend payout that balance the need of the shareholders for their current income and expected future growth of the corporate firms so as to maximize the value of the firm. Within the framework of types of dividend Policy mentioned above, the corporate firm may choose to follow any of the dividend policy mentioned below:

Regular and Stable Dividend Policy

Regular and stable dividend Policy is mostly used by most of the corporate firms. It is based on maintaining fix annual cash dividend for several years. It can be changed only when future earning looks sufficiently strong and permanent to support a new higher level of dividends. Irrespective of fluctuations in earnings, dividend per share remains relatively stable unless payout ratio drops below minimum of earning per share. The corporate firms that adopt regular and stable dividend Policy regard the

payment of dividend is an important variable in the stock valuation process. (*Mathur; 1979:125*)

Regular Plus Extra Dividend Policy

The policy refers to the combination of regular dividend with the payment of additional dividends whenever earnings are significantly high. Under this policy, low level of dividend is set first and then extra dividend in the time of final announcement of annual dividend is paid. The policy is undertaken to give the shareholders impression of corporate firms' intention of paying regular dividends. Corporate firm pursuing this policy emphasizes on need to pay regular dividends and at the same time need to retain earnings to meet long-term financial requirement. (*Shrestha; 1980:126*)

Fixed Payout Policy

Corporate firms following fixed payout policy establish fix percentage of profits that will be paid out each year as dividends. Dividend Payout Ratio (DPR) relatively remains constant and may increase with the increase in profit. Dividend per share fluctuates from year to year while it may lead to erratic market prices for the corporate firms' stocks. (*Sharma; 2001:128*)

Residual Dividend Policy

Residual dividend policy is based on the premises that investors prefer to have a firm retain and reinvest earnings rather than pay them out in dividends if the rate of return the firm can earn on reinvested earnings exceeds the rate of return investors can obtain for themselves on other investments of comparable risk. Further, it is less expensive for the firm to use retained earnings than it is to issue new common stocks. A firm using residual policy would follow these four steps:

- Determine the optimal capital budget.
- Determine the amount of equity required to finance the optimal capital budget given its target capital structure, recognizing that the funds used will consists of both equity and debt to preserve the optimal capital structure.
- To the extent possible, use retained earnings to supply the equity required.
- Pay dividends only if more earnings are available that is needed to support the optimal capital budget. (*Mathur; 1979:129*)

2.1.3 Dividend Payment Procedure

The dividend payment procedures on behalf of a corporate firm can be given below:

Declaration Date

This is the day on which the board of directors declares the dividend. At this time they set the amount of the dividend to be paid, the holder of record date and the payment date.

Holder- of- Record Date

The dividend is payable to shareholders whose names appear in the register of members as on the holder of record date. This is the date the company opens the ownership books to determine who will receive dividend; the stockholders of record on this date receive the dividend. If shareholders sell share before the record date, the buyer of shares will receive dividend. If shareholders sell shares after the record date, the seller of the shares will receive dividend. (*Pandey; 1982:276*)

Ex- Dividend Date

This day is four days prior to the record date. Share purchased the after the ex-dividend date are not entitled to the dividend. The dividend is attached to the stock until the Ex-dividend date (four business days before the holders of record date), after which date it stays with the seller.

Payment Date

At the time of dividend announcement, the board of directors also specifies the date on which the payment of dividend is actually made. This is called the payment date. On this date the company actually pays the dividend to all the stockholders of the date of record. (*Waring; 1931:277*)

2.1.4 Stock Split and Reverse Split:

A stock split is essentially when a company increases the number of shares. In case of stock splits, a company may double, triple or quadruple the number of shares outstanding. The market price of each share is merely lowered; economic reality does not change at all. It is therefore completely irrational for investors to get excited over stock splits. The effect of a stock split is an increase in the number of shares

outstanding and a reduction in the par, or stated, value of the shares. The total net worth of the firm remains unchanged. The stock split does not involve any cash payment, only additional certificates representing new shares.

Reverse split is a method that is used to raise the market price of a firm's stock by exchanging certain number of outstanding shares for one new share of stock. The effect of a reverse split is a decrease in the number of shares outstanding and an increase in the par, or stated, value of the shares. The total net worth of the firm remains unchanged. The reverse split does not involve any cash payment, only additional certificates representing new shares. Reverse split is used to stop the market price per share below a certain level. (*Thapa and Gautam; 2011:341*)

2.1.5 Stocks Repurchase

Stock repurchase is a method, in which a firm buys back shares of its own stock, thereby decreasing shares outstanding, increasing EPS, and often increasing the price of the stock. Share price for repurchase or the equilibrium price is calculated from the following equation;

$$\text{Repurchase price (P)} = \frac{S \times P_c}{S - n}$$

Where,

S= total number of share outstanding

P_c= current market price per share

n=number of shares to be repurchased

In stock repurchase reduce the no of outstanding shares. Share repurchase has inverse objective than the bonus share issue. The company can repurchase its outstanding share through a fixed price self-tender offer. Repurchasing of share is considering as the part of dividend policy. If firm have excess cash and insufficient profitable investment opportunities to justify the use of these funds. The firm has two alternatives to distribute cash whether repurchase of shares or increase dividends. These two alternatives should make no difference to shareholders. Theoretically in the absence of personal income taxes with repurchase fewer shares remain outstanding and earnings per share (EPS) and ultimately, dividend per share (DPS) rise. As the result, the market price per share (MPS) rises as well. (*Thapa and Gautam; 2011:344*)

2.1.6 Factors Affecting Dividend Policy

Dividend policy is the major financial decision of management. Which determines the percentage of earnings of the firm is distributed its shareholders and what percentage of earnings retained in the firm which is decision for the growth of the firm. Dividends are desirable to its shareholders because it tends to increase current wealth where as retained earnings are desirable for the firm to the exploit investment opportunities as the internal sources of financing. So in order to develop a long term dividend policy, the directors should at bring a balance between desire of shareholders and the needs of company the company. The firm's decision regarding the amount of earnings to be distributed as dividend depends on the number of the firm's ability to declare and pay dividends are discussed factors. The factors which affect dividend policy are given below. (*Waring; 1931:221*)

Legal Rules

The legal rules are important in establishing the legal boundaries with in which a firm finalized the dividend policy can operate. The legal rules provide the framework within which dividend policy can be formulated. Certain legal rules may limit the amount of dividends that a firm may pay. These legal constraints fall into two categories. First, Statutory restrictions may prevent a company firm paying dividends, while specific limitation differ by state policy. (*Waring; 1931:222*)

Generally a corporation may not pay dividend in following situations;

- Firm s liabilities exceed its assets.
- Amount of dividend exceeds the accumulated profits
- Dividend is paid from capital invested in the firm.

Liquidity Position

The liquidity position of company is a prime position of company prime consideration in dividend decision. Because dividend represents a cash outflow, the greater the cash flow and overall liquidity position of the company, the greater its ability to pay a dividend. A company that is growing and profitable may not liquid because its fund may go into the fixed assets and permanent working capital. Because the management of such a company usually desired to maintain some liquidity reduce to give its

financial flexibility and protection against uncertainty. It may be hesitant to risk this position to pay a large dividend. (*Van Horne; 2000:575*)

Debt Repayment and Restriction on Debt Contract

The dividend policy of corporate firm using debt is also affected by the decision to repay debt on or before maturity, generally require more retention of earning lowering the dividend rate. Sometimes long term debt contract may specify certain restriction such a payment of dividend from profit only after signing debt contract and requiring maintaining to desired level of net working capital. These restrictions certainly affect dividend policy. When a firm has sold debt to finance expansion or to substitute for other firms of financing, it is faced with two alternatives. It can refund the debt at maturity by replacing it with another form of security, or it can may provisions for paying debt. If the decision is to retire the debt, this will generally require for the retention of earnings. (*Waring; 1931:225*)

Access to Capital Markets

All firms do not have equal access to capital market. A large established firm with record of profitability and stability earning has easy access to capital markets and other firms of external financing. Easy accessibility to the capital market provides flexibility to the management in paying dividend as well as in meeting the corporate obligation. Thus the fast growing firm having tight liquidity position will not face difficulty in paying dividends if it has access to the capital market. (*Shrestha; 1981:298*)

Tax Position of Stakeholder

Because of difference among investors tax rate, certain investor preference for dividend versus capital gain have been observed in the market. Corporation owned by largely taxpayers in high income tax brackets tend toward lower dividend payout where as corporations owned by small investors tend toward higher dividend payout. (*Thapa and Gautam; 2011:342*)

Control

Control of management is very important for many small firms. These owners would prefer the use of debt and retained profits to finance new investments rather than issue stock. As a result dividend payout will be reduced. (*New encyclopedia; 1986:345*)

Rate of Assets Expansion

The more repaid the rate which the firm is growing, the greater its need for financing assets expansion. The greater the future need for funds, the more likely the firm is to retain earning rather than pay them out. If a firm seeks to raise funds externally, naturally sources are the present shareholders, who already know the company. But if earning are paid out as dividend and are subjected to high personal income tax rates, only a portion of them will be available for investment.

Desire of Shareholders

Shareholders may be interested either in dividend incomes or capital gains. Wealthy shareholder in a high income tax bracket may be interested in capital gains as against current dividends. A retired and old person, whose source of income is dividend, would like to get regular dividend. In a corporation with relatively few stockholders, management may be able to set dividends according to the preferences of its stockholders. For example, assume that the majority of a firm's stockholders are in high marginal tax brackets. They probably favor a policy of high earning retention, resulting in eventual price appreciation, over a high payment policy. But in a large corporation whose shares are widely held, it is nearly impossible for a financial manager to take individual shareholder's preferences into account when setting dividend policy. (*Thapa and Gautam; 2011:343*)

Profit Rate

The rate of return on assets determines the relative attractiveness of paying out earning in the form of dividend to stockholder. If other things remain same high profit rates is the indicator of high dividend payout.

Stability of Earning

The firm which has stable earning is able to pay higher rate of dividend then those firms which do not have stable earning. The firm with stable earning has other firms are not able to predict the next years earning so they prefer to have low payout ratio and retain more amount for coming year. (*Pradhan; 1992:422*)

2.2 Review of Major International Studies

As we mentioned earlier, there have been so many studies made by the different persons and institutions for dividend policy and stock price. There are two opinions regarding to dividend payout and market price of the shares. One point of view is that dividends are irrelevant and the amount of dividend payout does not affect the market value of the share. The other is dividends are relevant and the amount of dividend paid affect the market price of the shares. Always a critical and confused question has arise, whether dividend policy affect the market value of the shares or not. To put light in these matter different studies made by different international scholars and researchers should be overviewed. Therefore some of the main researchers are going to be discussed below:

Lintner's Study (1956)

Lintner conducted a study in 1956 which is focused in the behavioral aspect of dividend policy. He investigated dividend pattern of 28 different companies of America and found that firms generally predetermines the desired payout and tries to achieve it and rarely considers other factors.

The objectives of study were:

- To identify occasions when a change in dividends might well have been under active consideration even though no change was made.
- To determine the factors which existed must actively into dividend decision. Different views were collected with regard to Occasion Company's responsible official including presidents, financial vice presidents, treasures, controllers and directors.

The model developed from his research is as follows:

$$D^*t = P \cdot EPSt \dots \dots \dots (i)$$

And,

$$D^*t - Dt - 1 = a + b(D^*t - Dt - 1) + e \dots \dots \dots (ii)$$

Where,

D^*t = Desired Dividend

$EPSt$ = Earnings per Share

P = Targeted payout Ratio

a = Constant related to dividend growth

b =Adjustment factor relating to previous periods dividend and desired level of dividend. ($b > 1$)

The Major findings of this study are as:

- Firms generally prefer desired proportion of earning to be paid as dividend.
- Investment opportunities of the firm are not considered for modifying the pattern of dividend behavior.
- Firms generally have target payout ratios in view while determining change in dividend per share.

Modigliani and Miller's Study (1961)

The most comprehensive argument for the irrelevance of dividend has been made by Franco Modigliani and Metro-Miller in 1961 A.D. They argue that value of the firm depends on the income produced by the assets, not on how this income is split between dividends and retained earnings.

Professor Modigliani and Miller hold that investors are indifferent to dividend and capital gains so dividends have no effect on the wealth of stakeholders. According to them it is the investment policy of the firm which increases earnings of firm and there by value of the firm. The manner in which earnings are divided into dividends and retained earnings does not affect this value.

The basic objectives of this study are as follows:

- To explain the irrelevance of a firms' dividend policy.
- The process of arbitrage balances or completely offsets two transactions, which are entered into simultaneously.
- Arbitrage can be applied to the investments function of the firm.

Modigliani and Miller provided following model to prove their theory

Market Value of Share

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

Symbolically,

$$P_0 = \frac{1}{(1 + K_s)} \times (D_1 + P_1) \dots \dots \dots (i)$$

Where,

P_0 = Market price of share at the beginning of the period.

D_1 = Dividend per share at the end of the period.

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

K_s = Cost of Equity capital.

If no new external financing exists the market value of firm can be computed by multiplying both sides by the no of the outstanding shares as follows:

$$nP_0 = \frac{n}{(1 + K_s)} \times (D_1 + P_1) \dots \dots \dots (ii)$$

Where,

n = No of outstanding shares.

New Shares

If retained earnings are not sufficient to finance the investment opportunities, issuing new shares is the other alternative. Assuming that m is the number of newly issued equity share at the price of P_1 , the value of firm at time 0 will be:

$$nP_0 = \frac{1}{(1 + K_s)} \times [nD_1 + (n + m)P_1 - mP_1] \dots \dots \dots (iii)$$

Where,

n = No. of shares outstanding

m = No of new shares to be issued.

Total Number of Shares

A firm can pay dividends and raise funds to undertake the optimum investment policy. If the firm finances all investment opportunities either by issue of new equity or retained earnings, the total number of new shares can be computed on the following way:

$$mP_1 = I - (X - nD_1) \dots \dots \dots (iv)$$

Where,

mP_1 = Amount obtained from the sale of new shares.

I = Amount required for new investment during the period.

X = Total earnings during the period.

Substituting the value of mP_1 of the equation (iv) to equation (iii) we get,

$$nP_0 = \frac{1}{(1 + K_s)} \times [(n + m)P_1 - I + X] \dots \dots \dots (v)$$

Hence the major findings of this study are:

- The current value of the firm is independent of its current dividend decision.
- The gained by stockholders in increased dividends is offset exactly by the decline in the terminal value of their stocks.
- Value of the firm is unaffected not only by current dividend decisions but also by future dividend decision as well.
- Thus, the stockholders are indifferent between retention and the payment of dividends in all future periods and stockholder wealth is unaffected by current and future dividend decisions. (*Thapa and Gautam; 2011:348*)

Walter's Study (1963)

Walter conducted a research in 1963 regarding dividend policies and a stock price argues that the choice of dividend affects the value of the firm. According to him, firms cost of capital and internal rate of return are the determining factors that decide upon the dividend policy. The main point which he emphasized is that there is a significance relationship between the internal rate of investment project and market rate demanded by the investor. This study emphasized that dividend policy can be used to maximize the wealth position of stockholders. The basic objectives of this study are as follows:

- To explain the relevance of the dividend policy.
- To study the relationship between the internal rate of return and the cost of capital of the firm, to give a dividend policy that maximizes the shareholder's wealth.

Walters's formula for determining the market price per share is as follows:

$$P_0 = \frac{DPS + \frac{r}{K_s}(EPS - DPS)}{K_s}$$

Where,

P_0 = Market price per share.

DPS = Dividend per share

EPS = Earnings per share

r = Internal rate of return (average)

K_s = Cost of capital or Capitalization rate

In Walters's model, the optimum dividend policy depends on the relationship between the firm's internal rate of return and its cost of capital. Walters view on the optimum dividend payout ratio can be summarized as follows:

Growth Firms:

Firm having $r > k$ may be referred as growth firm. The optimum payout ratio for a growth firm is zero. The market value per share (P) increases as payout ratio declines when $r > k$.

Normal Firms:

Firm having $r=k$ may be referred as normal firm. There is no unique optimum payout ratio for a normal firm. One dividend policy is as good as other. The market value per share is not affected by the payout ratio when $r = k$.

Declining Firms:

Firm having $r < k$ may be referred as declining firm. The optimum payout ratio for a declining firm is 100%. Market value per share (P) increases as payout ratio increases when $r < k$.

Hence, the major findings of this study are:

- When the firm is in growth stage, then dividends are negatively correlated with stock price.
- When the firm is in declining stage, then dividends are positively correlated with stock price.
- There is no relationship between dividend and stock prices in the normal firm.

- Thus, dividend policy is a financing decision when dividend policy is treated as a financing decision; the payment of cash dividend is a passive residual (*Khan; 1990:140*).

Gordon's Model (1962)

Gordon conducted a research in 1962 regarding the interesting approach relating the market value of the firm to dividend policy. He holds that investors have a strong preference for present dividends to future capital gains under the condition of uncertainty. This is relevant theory similar to the Walters model. In this study, he explained that “the investors prefer present dividend rather than future capital gains.” According to him market value of a share is equal to the present value of an infinite stream of dividends to be received by the shareholders.

The basic objectives of this study are as follows:

- To explain the relevance of dividend policy as similar to Walter's study.
- The price of share will be the discounted value of infinite stream of dividends to be received by the shareholders.

Accordingly, from the above objectives:

$$P_0 = \frac{D_0(1+g)^1}{(1+K_s)^1} + \frac{D_0(1+g)^2}{(1+K_s)^2} + \dots + \frac{D_0(1+g)^n}{(1+K_s)^n}$$

Gordon has further developed the following equation for the computation of market value of stock.

$$P_0 = \frac{EPS(1-b)}{K_s - br}$$

Where,

P_0 = Market price per share

EPS = Earnings per share

b = Retention ratio

K_s = Cost of capital

1-b = Dividend payout ratio

br = Growth rate

According to this model following facts are revealed:

Growth Firm: In case of growth firm i.e. $r > K_s$, share price tends to decline in corresponding with increase in payout ratio or decrease in retention ratio i.e. b . Therefore dividend and stock price are negatively correlated in growth firm.

Normal Firm: Firms having $r = K_s$ are referred as normal firm. In case of normal firm share price remain constant regardless of change in dividend policies.

Declining Firm: In case of declining firm i.e. $r < K_s$, share price tends to rise in correspondence with raise in dividend payout ratio. It shows that dividend and stock prices are positively correlated with each other in a decline firm.

Hence, the major findings of this study are as follows:

- When the firm is in growth stage, then dividends are negatively correlated with stock price.
- When the firm is in declining stage, then dividends are positively correlated with stock price.
- There is no relationship between dividend and stock prices in the normal firm.
- Thus, dividend policy is a financing decision. When dividend policy is treated as a financing decision, the payment of cash dividend is a passive residual.
(Pandey; 1995: 745-746)

Gupta (1973)

Gupta conducted an empirical study on bonus issue in bonus share in India. He studied 496 bonus issues during 1948-1971. It was found that bonus share was issued by companies not necessarily with a view to increasing total dividend distribution. This study attempts to test some popularly held beliefs about the effect of bonus share issue on dividends and share prices. It examines the practices among Indian companies regarding the making of bonus issues and exploits interest controversy whether, and to extent, such bonus issue represents real gains to their recipients. It was observed that as many as one- third of the companies issuing bonus shares did not increase total quantum of dividend on the enlarged capital, a significant number of them even reducing the total dividend distribution. Gupta also tested the impact of bonus issues on the same prices. It was found that the speculative price rise which

occurred immediately after bonus announcement was frequently based not to so much on a realistic appraisal of the fundamental factors governing profits and dividend as psychology. The price rise at the end of one year from bonus announcement was less universal than the price rise in the period of immediately after such announcements.

The basic objectives of studies were:

- It specially examines how far bonus share represent a real addition to the shareholders wealth and income.
- To study the effect on dividends and share price changes associated with bonus issue.
- To investigate the characteristic features of bonus issues by the Indian companies.
- The analysis is intended to remove some of the widely held misconception about bonus issues.

Gupta used simple statistical tools such as percentage, frequency distribution, average and standard deviation to study and analyze the data. The original report was subsequently revised and simplified to make it of wider interest without altering the basic framework and the major conclusion. His study was wide coverage and immense on bonus share. The major findings of this study are:

- The great majority of the bonus issues in India are in relatively high ratio of 20% (1:5) and above.
- The bonus issues are made by Indian companies at irregular interval without any constant policy.
- The increase in dividend distribution was not quite as universal as is commonly believed and almost one third of the cases showed no increase in the quantum of dividend distribution following the bonus issue.
- There is no systematic relation exists between the bonus ratios on the one hand and the percentage of dividend increase on the other hand.
- The analysis conclude that the higher bonus ratios were found more often among companies paying high dividend rates, and lower ratios more often among companies paying low dividend rates.
- The analysis find that the positive correlation between the magnitudes of price rise and the bonus ratio. (*Thapa and Gautam; 2011:354*)

2.3 Review of Journals and Articles

Ojha (2000) published an article “*Financial Performance and Common Stock Pricing.*” The main objectives of this study are:

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

The major findings of this study are:

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

Timilsina (2001) conducted a research on “*Capital Market Development and Stock Price Behaviors in Nepal.*” He published an article with a heading Capital Market.

The major findings of the study are:

- The coefficient of correlation between earning per share (EPS) and observed market value of share and also between the dividend per share (DPS) and observed market value of share were computed.
- Regressions were run to see the influence of the explanatory variables, EPS and DPS on equity prices.
- A positive correlation was found to exist between EPS and the market price of the share.

- The coefficient of correlation between dividend per share and the market price was also computed taking DPS as independent variable and market price as dependent variable.
- A high degree of positive relationship ($r = 0.83$) was observed between the two variables.
- The market price of shares depends on EPS as well as on DPS, but DPS is more prices sensitive and it will have direct and immediate response in the market.

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

Chitrakar (2011), "*Stock Gained on hope*" The Nepali share market was filled with some optimism after closing the review period at the highest point as the political situation looked like improving. That was supported by the hope that the financial reports for second quarter of the fiscal year from the listed companies will show improvement in their performance. The benchmark Nepse index advanced 12.98 points or 3.21% to settle at 404.33. The session's high was on 27 December, 2010 with 407.72 while session's low was at the opening with 391.35 on 20 December, 2010.

2.4 Review of Previous Thesis

Prior to this thesis some students have conducted several thesis works. Out of them some studies are supported to be relevant for this study, which have been reviewed in this section.

Katwal (2001) has carried out a research on "*A Comparative Study Of Dividend Policy in Commercial Bank*" in 2001. The main objectives of his study are:

- To study the current practices of dividend policy in commercial banks.
- To find out the impact of dividend on share prices.
- To analyze the relationship of financials indicators.
- To examine if there is any uniformity among DPS, EPS and DPR on the six sample banks.

The methodology used in the study includes financial tools such as ratio analysis and statistical tools such as correlation co-efficient and probable error. Secondary data are used for the analysis.

The major findings of his study are:

- Average EPS and DPS for the period covered by the study of all concerned banks are satisfactory.
- Analysis of coefficient of variance indicates that there is large fluctuation in EPS and DPS and other are relatively more consistent.
- The analysis of DPR shows that none of the sample banks have consistent dividend policy.
- The market value of shares in market is fluctuating in all sample banks.
- The most important decision is that no specific dividend payment strategy is followed by these banks.
- Payment of cash dividend and stock dividend are made without wise managerial decision due to unstable and adequate dividend and unequal payout ratio.

Ghimire (2002) has conducted a research on the topic, “*Dividend Policy of Listed Companies with ref. to Banks, Finance and Insurance Companies*”. The main objectives of his study are:

- To identify the dividend policy of different sample companies.
- To identify the regularity of divided distribution of different listed companies.
- To identify the relationship between dividend policy and other financial indicators.
- To find out whether dividend policy affect the value of the firm or not.
- To analyze the relationship between DPS and MPS.

- To provide suggestions for the improvement of sample companies dividend policy on the basis of findings.

The methodology used in the study includes financial tools such as ratio analysis and statistical tools such as correlation co-efficient and probable error. Secondary data are used for the analysis.

The major findings are:

- The average dividend per share of the banks is satisfactory compared to finance and insurance companies.
- The average earning per share of the bank is also more satisfactory than finance and insurance companies.
- DPS of the finance companies are more fluctuating in comparison to banks.
- Dividend yield of the finance and insurance are higher than banks and more consistent too.
- Banks are following aggressive dividend policy due to higher DPR whereas finance and insurance companies implemented moderate dividend policy.

Dhungel (2004) has conducted a study on “*Dividend Policy of the Commercial Banks in Nepal*”. The main objectives of his research are:

- To study whether the commercial banks are following the suitable dividend policy or not.
- To study whether the dividend policy affects the value of the firm or not.
- To compare the dividend policy followed by different commercial banks chosen.
- To study the relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR, Net worth, Net profit and book value of share.

Major findings are:

- None of the sample banks are following suitable dividend policy except Standard chartered bank.
- The regression analysis of DPS on MPS shows that increase in MPS leads to decreases in DPS in all the sample banks except Standard chartered bank.

- There is positive relationship between EPS and MPS in all the banks except in case of SBI bank.
- Change in dividend per share affects the value of share differently in different
- banks.

Kharel (2006), conducted her studies on “*Dividend Policy of Commercial Banks with respect to Nepal Arab Bank Ltd., Himalayan Bank Ltd and Bank of Kathmandu Ltd.*” based on the data collected for the years from 2000/01 to 2004/05. The main objectives are:

- To analyze the prevailing dividend practices of sample banks.
- To analyze and evaluate the application of dividend decision in the selected banks.
- To analyze the relationship of dividend with earning per share, net worth, net profit, market price and book value per share.

Major findings are:

- DPS of the commercial banks in average shows that there is no regularity in dividend payment.
- Banks should pay proper attention to enhance their percent of cash dividend on paid up value.
- From the regression analysis it can be conclude that a change in DPS affects the share price differently in different banks.
- Payment ratio affects stock price differently in different banks.

Jha (2007) has performed a study on “*Study on Dividend policy*”. A comparative study between banks, insurance companies and financial institution with eight years data. His main objectives of the study are as follows.

- To highlight dividend practice of the bank, insurance and financial companies.
- To analyze the relationship of dividend with various important variables.

Major findings of the study are:

- Nepalese government NRB, SEBON, NEPSE should be conscious to discourage market imperfection.

- Companies should have long term policy regarding the adoption of suitable dividend policy.
- Even if not earning has been increasing, the dividend per share has widely fluctuated. Distribution of bonus share should be pre-evaluated.
- Their needs a proper information discloser to the investor.

Raya (2008) has conducted a study on “*The Study of Dividend Policy of the Commercial Banks in Nepal.*” The main objectives of her study are:

- To study whether the commercial banks are following the suitable dividend policy or not.
- To compare the dividend policy followed by different commercial banks chooses.
- To study the relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR, net worth, net profit and book value of share.
- The methodology used in the study included, financial tools such as ratio analysis and statistical tools such as correlation analysis and test of hypothesis etc. She used secondary data for the analysis.

The major findings of her study are:-

- There is lack of rules and regulations that bind companies to pay dividend every year. Not only the companies do not have dividend policy but also the government does not have any clear policy towards dividend.
- There seems instability of dividend and inconsistency in dividend payout ratio of the banks.
- Government does not have any clear policy towards dividend and to improve the efficiency of the companies. The number of companies cannot earn enough profit and bureaucrats accused the cause of inefficiency to managers which is not sound.

Maharjan (2008) has conducted a study on “*Dividend Policy of Listed Commercial Banks.*” The major objectives of the study are:-

- To examine the dividend policies of listed banks.

- To analyze the relationship between dividends per share (DPS), earning per share (EPS) and market price per share (MPS).
- To analyze the effect of dividend on share price
- The methodology used in the study included, financial tools such as ratio analysis and statistical tools such as correlation analysis, regression analysis, trend analysis and test of hypothesis etc. She used secondary data for the analysis.

The major findings of the research are:

- Earnings per share of banks are increasing which indicates that banks in Nepal are doing well.
- Commercial banks of Nepal prefer cash dividend rather than stock dividend because it is easy and low operation cost to distribute likewise they prefer to provide fair return to Shareholders because in the one hand they have to increase their capital base by year 2060 and in the other hand they have to retain the market image as well.
- The share price in Nepal affected by various other factors rather than the earnings and dividend of those banks.

Singh (2010) has conducted a study on *"The impact of dividend policy on market price of share with reference listed commercial bank in Nepal"*. Singh's objectives are as follows;

- To major uniformity in DPS, EPS, MPS and DPR of the sample firms.
- To find the major factors affecting dividend policy of the firm.
- To see whether dividend distributions are in proportionate to the earnings of the firms or not.

The major findings are as follows;

- Average market price per share of NABIL, HBL, BOK, SBI, NB and EBL is Rs. 3558.83, 1391, 1278.33, 1045.833,420 and 1982.67 respectively mean MPS of NABIL is greater than other companies. Higher market price creates the positive attitude of the investors towards the bank, which consequently attracts the investor to invest in such high valued shares.

- Correlation coefficient between EPS & MPS of three (HBL, BOK, SBI) are significant and three bank are not significant. All are positive relation of EPS and MPS.
- Regression Coefficient (b) is highest between EPS and MPS of BOK and lowest is NB. The highest t-value (5.28) is BOK and lowest T-value (0.56) is NB.
- Correlation coefficient between EPS & DPS of their bank (NABIL, BOK, EBL) are significant but BOK is negative relation and two bank (SBI, HBL) are insignificant. NB bank has not any relation of EPS and DPS because it didn't paid any dividend.
- Regression Coefficient (b) is highest between EPS & DPS of NABIL (1.19), BOK have negative regression coefficient. In the case of t-value the NABIL bank has highest t-value (3.94) and the BOK has a negative (-2.3) t-value.

Gyawali (2011) “*Dividend policy and its impact on market price of shares*” on the following major objectives are as follows;

- To identify the impact of dividend policy on market price of stock.
- To measure uniformity in DPS, EPS, MPS and DPR of the sample firms.
- To identify the relationship between DPS and other financial indicators.

The major findings are as follows;

- Average Dividend Payout ratio of NIC, MBL NIBL HBL and KBL is Rs 18.26, 2.87, 31.14, 34.37 and 13.24 respectively. Mean DPR of HBL is greater than other companies. Higher DPR indicate the company is greater return on dividend.
- The correlation of DPS & MPS of NIC, NIBL and KBL has negative correlation and HBL have highest positive correlation.
- Correlation coefficient between EPS & MPS of three (HBL, NIBL, SBI) are significant and three bank are not significant. All are positive relation of EPS and MPS.
- Regression Coefficient (b) is highest between EPS and MPS of HBL and lowest is KBL. The highest t-value (2.367) is HBL and lowest T-value (0.0624) is MBL.

- Correlation coefficients between EPS & DPS of all banks are significant but NIBL is negative relation and other four banks have positive relation.
- Regression Coefficient (b) is highest between EPS & DPS of NIC (1.29), NIBL have negative regression coefficient. In the case of t-value the NIC bank has highest t-value (2.927) and the HBL has a lowest (0.8323) t-value.

2.5 Research Gap

There have been many national and international studies in the field of dividend policy. All concepts and practices of foreign authors about the dividend practices are not more practicable in the context Nepalese dividend policy because Nepalese capital market is in the early stage of development. So being in the early stage even those studies have tried to find out the relationship between dividend policy and market price of the stock, the conclusion made by the international studies may not be relevant in the Nepalese context. So it is recommended to devote some efforts and think foreign model dividend practices in Nepalese dividend Policy.

So far there have been so many studies of Nepalese researchers which can be considered as landmark in the field of dividend policy. But many more changes appear in the market in short time period. So it is necessary to carry out a fresh study related to dividend pattern of commercial banks of Nepal.

This study will analyze the price determination of common stock in secondary market of Nepal. Usually the price of common stock in primary market is par value but in secondary market may be any price i.e. more, less or equal to par value. In this study it is tried to carry out the distinct from the previous studies in terms of sample, size and methodology used. The study has covered only five commercial banks. Latest five years data have been analyzed with due consideration of EPS, DPS, DPR and MPS. In order to assess the impact of dividend on market price of stock available information from concerned banks were reviewed and analyzed. Regression analysis has been done taking market price of share (MPS) as dependent variable and other variables like DPS, EPS and D/P ratio as independent variable. Trend analysis of MPS, DPS and EPS is also done which helps to predict the future of the banks. So it has been believed that this study is quite different from earlier thesis in many aspects

CHAPTER - III

RESEARCH METHODOLOGY

Research is the process of a systematic and in depth study or search of any particular topic, subject or of investigation backed by the collection, presentation and interpretation of relevant details or data. Research methodology is a way to solve the research problem systematically. This is the steps, guidelines and tools used in the research by the researcher. It considers the logic behind the methods used in the context of research study and explains why particular method or technique is used. It highlights about how the research problem has been defined, what data have been collected, what particular method has been adopted, why the hypothesis has been formulated etc. Really, it is one of the most important parts of the research which provides outlines of the research and also present method and process of entire research. (*Joshi; 2007:19*)

3.1 Research Design

Research design is a conceptual framework within which a researcher conducted. Research design is plan for the collection and analysis of data. It presents the series of guide posts enable the researcher to progress in the right direction in order to achieve the goal. The design may be a specific presentation of the various steps in the research process. These steps include the selection of a research problem, presentation of the problem, formulation of hypothesis, conceptual clarity and methodology, survey of literature and documentation, bibliography, data collection, testing of hypothesis, interpretation, presentation and report writing. Generally, a common research design possesses the five basic elements viz. (i) selection of problem (ii) methodology are used (iii) data gathering (iv) data analysis and (v) report writing. (*Joshi; 2007:52*)

This analysis is based on certain research design keeping on objectives of the study in mind. This research design is guideline studying profound way for research ability. This study focuses towards the bonus share issue and practices. In this research, research design is used for analytical as well as descriptive methods of collected data. This is the empirical research work, this research work help to understand some of the features of bonus share issue and impact on stock price in Nepalese corporate firms.

3.2 Population and Sample Selection

Population refers to the entire group of people, events or things of interest that a researcher wishes to investigate. As this study is about Dividend policy of commercial banks, all 32 Commercial banks of Nepal are taken into account as population. Out of the total population i.e. 32 commercial banks, 4 commercial banks are taken for this study. These four banks are the samples selected by using judgmental sample methods for this research. The selected sample banks with the selected fiscal year are:

Bank	Fiscal Year	Period	% of cover
BOK	2006/07 - 2010/11	5	25
EBL	2006/07 - 2010/11	5	25
NIBL	2006/07 - 2010/11	5	25
NSBI	2006/07 - 2010/11	5	25
Total		20	100

3.3 Nature and Sources of Data

The researcher can use two methods of data collection i.e. Primary and Secondary data. Primary data are the data collected directly from the site. It can be called as first hand data. Those data are very reliable if researcher can reach the correct destination with required tools. Secondary data are second hand data collected from different other sources such as magazines, newspapers, journals, second persons, etc. Here both the primary and secondary data are used for the study. With the list of questionnaire, commercial banks its shareholders and other related personals are visited and data are collected from there. Some data are again collected from the respective commercial banks annual reports especially from profit and loss accounts, balance sheet and other publications made by the banks, which are the secondary data. Likewise, some other related information is gathered from related banks and related agencies like Nepal Rastra Bank, Nepal Stock Exchange Limited.

3.4 Data Processing Techniques

After the necessary data has been collected, relevant facts and figure have to be tabulated under the different headings. Such tables and formats are to be interpreted and explained as required. Different tools and techniques are used to interpret and

explain the data. Scientific calculator and simple microcomputer has been used to compute data.

3.5 Tools of Analysis

Various statistical and financial tools are used in this study. Wide varieties of methodology have been applied according to the reliability and consistency of data. Before using the analytical tools to compare the result, the data containing in the financial statements have been grouped and rear ranged so as to make comparison easy. For the purpose of analysis the data of five years were taken as sample from 06/07 to 10/11. The data are analyzed financially and statistically. The calculated results are also tabulated under different heading for ease of reading, and then they are compared with each other to interpret results. The financial tools used here are ratios related to earning per share, dividend per share, dividend yield, dividend payout ratio and the market price per share. The statistical tools that are used are arithmetic mean, standard deviation, coefficient of correlation, coefficient of determination, regression equation, and trend analysis.

3.5.1 Financial Tools

To evaluate the financial position and performance of any firm ratio is used as a key tool of financial analysis. “Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet and profit and loss account”. Financial analysis is the use of financial statements to analyze a company's financial position and performance and to assess future financial performance. The financial tools used in this study are briefly presented below:

Earnings per Share (EPS)

Earnings per share refer the rupee amount earned per share of common stock outstanding. EPS is one of the most important financial indicators, which measures the earning capacity of a firm. It measures the profit available to the ordinary shareholders on a per share basis. The higher earning indicates the better achievements of the profitability of the banks by mobilizing their funds and vice versa. In other words, higher earnings per share denote the strength and lower earnings per share indicates the weakness of the banks. EPS is calculated by dividing

net income available to the common stockholders by the total number of common shares outstanding.

$$\text{Earnings per share} = \frac{\text{Net profit after tax}}{\text{No. of shares outstanding}}$$

Dividend per Share (DPS)

Dividend per share indicates the rupee earnings actually distributed to common stockholders per share held by them. It measures the dividend distributed to each equity shareholders. The DPS simply shows the portion of earning distributed to the shareholders on per share basis. Generally, the higher DPS creates positive attitude of the shareholders toward the bank, which consequently helps to increase the market value of the shares. And it also works as the indicator of better performance of the bank management. It is defined as the result received by dividing the total dividend distributed to equity shareholders by the total number of equity shares outstanding.

$$\text{DPS} = \frac{\text{Total dividend paid}}{\text{No. of shares outstanding}}$$

Dividend Payout Ratio (D/P Ratio)

It is the portion of the earning used for the payment of dividend. The dividend payout ratio is the earnings paid to the equity holders from the earnings of a firm in a particular year. This ratio shows what percentage of the profit is distributed as dividend and what percentage is retained as reserve for the growth of the banks. In other words, the amount of dividend that a bank pays depends upon the earning capacity of the bank. Higher earning enhances the ability to pay more dividends and vice versa. There is a reciprocal relationship between dividends and retained earnings, the higher the dividend payout ratio, the lower will be the retained earnings and hence the capacity of internal financing of the firm is checked. It is calculated to indicate the percentage of the profit that is distributed as dividend. This ratio is calculated by dividing dividend per share by the earning per share. It is the percentage of profit i.e. distributed as dividend. It is calculated as follows:

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

Market Price of Shares

It reflects per unit price of the share traded in the market. MPS is determined according to the demand and supply of share in the market. If there is high demand it leads to the increase in MPS and if there is low demand it leads to decrease in MPS. MPS also indicates the performance of the firm. Firm with high MPS are regarded better and are thought to be in a good financial position.

Price Earnings Ratio (P/E Ratio) / Earning Multiplier

Price- earnings ratio is also called the earnings multiplier. Price- earnings ratio is the ratio of market price per share to earnings per share. In other words, this represents the amount which the investors are willing to pay for each rupee of the firm's earnings. It reflects the price currently paid by the market for each rupees of currently reported earnings per share.

The P/E ratio measures investor's expectation and market appraisal of the performance of the firm. This is important to compare the market share prices of different stocks given their earning per share. The higher P/E ratio implies the high market share price of a stock given the earning per share and the greater confidence of investor in the firm's future. This ratio is computed by dividing Market per share by Earning per share. Thus,

$$\text{P/E Ratio} = \frac{\text{Market Price per share (MPS)}}{\text{Earning per share (EPS)}}$$

Earning Yield (EY)

Earning yield is the percentage of earning per share to market price per share in the stock market. In other words, it is a financial ratio relating to earning per share to the market share price at a particular time. It measures the earning in relation to market value of the share. It gives some idea that of how much an investor is earning for his money. The share with higher earnings yield is worth buying. Earning yield is informative to compare the market share prices of stocks in the secondary market. It is calculated as:

$$\text{Earning Yield} = \frac{\text{Earning per share (EPS)}}{\text{Market Price per share (MPS)}}$$

Dividend Yield (DY)

Dividend yield is a percentage of dividends per share on market price per share. It measures the dividend in relation to market value of share. So, dividend yield is the dividend received by the investors as a percentage of market prices per share in the stock market. This ratio highly influences the market price per share because a small change in dividend per share can bring effective change in the market value of the share. The share with higher dividend yields is worth buying. Thus the price of higher dividend yields increases sharply in the market. Dividend has important guidance to commit funds for the buying shares in the secondary market. This ratio is calculated by dividing dividend per share by market price of the stock. Thus

$$\text{Dividend Yield (DY)} = \frac{\text{Dividend per share}}{\text{Market price per share}}$$

3.5.2 Statistical Tools

Statistical tools are the mathematical techniques used to analyze and interpret performance. It is used to describe the relationship between variables and interpret the result. Statistics is also used to test the hypothesis that is set to know the information of population.

Mean (\bar{X})

The arithmetic mean or average is the sum of total values to the number of observations in the sample. It represents the entire data which lies almost between the two extremes i.e. the largest and the smallest item. For this reason an average is frequently referred to as a measure of central tendency. In this study it is used in data related to dividend of sample banks over five years. It is calculated as:

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N}$$

Where,

$\sum X$ = Sum of total values

N = Number of observation

Standard Deviation (S.D.)

The measurement of the scatterings of the mass of figures in a series about an average is known as dispersion. S.D. is an absolute measurement of dispersion in which the

drawbacks present in other measures of dispersion are removed. The high amount of dispersion reflects high standard deviation. The small standard deviation means the high degree of homogeneity of the observations. In simple term high SD means very less similarity in the values and low SD means high similarity among the values. SD gives the accurate result between the values only if their mean are same. In case of different mean, SD cannot be the accurate result. It is calculated for selected dependent and independent variable specified. It is the positive square root of mean squared deviation from the arithmetic mean and is denoted by and is calculated as follows:

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N}\right)^2}$$

Coefficient of Variation (CV)

Coefficient of Variation measures the relative dispersion and denoted by CV. It is used in such problems where we want to compare the variability of two or more series. The series for which the CV is greater is said to be more variables and conversely less consistent, less uniform, less stable or less homogeneous. On the other hand, that series for which the coefficient of the variation is less is said to be less variable or more consistent, more uniform, more stable or more homogeneous. It is obtained by dividing by the arithmetic mean to standard deviation. Thus

$$\text{Coefficient of variation(CV)} = \frac{\sigma}{\bar{X}} \times 100\%$$

Where,

σ = Standard deviation

\bar{X} = Mean

CV reflects the relation between standard deviation and mean. The relative measure of dispersion based on the standard deviation is known as coefficient of standard deviation. The coefficient of dispersion based on standard deviation multiplied by 100 is known as C.V. It is used for comparing variability of two distributions.

Coefficient of correlation (r)

Correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. The coefficient of correlation

measures the direction of relationship between two set of figures. It is the square root of coefficient determination. Correlation can either be negative or positive. If both variables are changing in same direction, then correlation is said to be positive but when the variation in the two variables take place in opposite direction the correlation is said to be negative.

The strength of correlation between the variables can be quantified. This is achieved by calculating the correlation coefficient. The correlation coefficient varies between +1 to -1; with +1 representing perfect positive correlations and -1 representing perfect negative correlation. In this study, simple coefficient of correlation is used to examine the relationship of different factors with dividend and other variables. The data regarding dividend over different years are tabulated and their relationship with each other are drawn out. In practical life, the possibility of obtaining either perfect positive or perfect negative correlation is very rare. The coefficient of correlation is calculated by:

$$\text{Correlation Coefficient (r)} = \frac{\sum xy}{\sqrt{x^2} \sqrt{y^2}}$$

Coefficient of Determination (r²)

The coefficient of determination is the measure of the degree of linear association or correlation between two or more independent variables. It measures the percentage total variation in dependent variables explained by independent variables. If r² has a zero value then, it indicates that there is no correlation which means all the data points in scatter diagram fall exactly on the regression line. If it has the value equal to one then it indicates that there is perfect correlation and as such the regression line is the perfect estimator. But in most of the cases the value of r² will lie somewhere between these two extremes of 1 and 0. One should remember that r² close to one indicates a strong correlation between two variables and r² near to zero means there is little correlation.

$$\text{Coefficient of Determination (r²)} = \frac{\text{Explained variation}}{\text{Total Variation}}$$

Or,

$$r^2 = 1 - \frac{\text{Unexplained variation}}{\text{Total Variation}}$$

Regression Analysis

Regression analysis is the development of the statistical model that can be used to predict the values of variable. There are two types of variable in regression analysis. The variable whose value is to be predicted is called dependent variable and the variable which is used for prediction is called independent variable. The dependent variable is based upon the value of independent variable. In this study the following simple and multiple regressions have used to analyze and test the relationship between dependent and independent variables.

The simple regression is used to study, the particular one dependent and one independent variable's relationship. The simple linear regression analysis would be:

$$Y = a + bX$$

Where,

Y is the dependent variable

X is the independent variable

a is the average value of Y when X equals zero

b is the expected change in Y per unit change in X

The multiple regression analysis consists of the measurement of the relationship between one dependent variable and two or more independent variables. The procedure is similar to that for simple regression, with a difference that other independent variables are added to the regression equation. If X_1 is the dependent variable and X_2 , X_3 are two independent variables, so that the multiple regression equation for the observed data is given by:

$$X_1 = a + b_1X_2 + b_2X_3$$

Where,

a = Point of intercept on Y-axis = the value of X_1 when $X_2 = X_3 = 0$

b_1 = Slope of X_1 with variable X_2 holding variable X_3 constant.

b_2 = Slope of X_1 with variable X_3 holding variable X_2 constant.

But this study is only based on simple regression analysis.

Probable Error

The Probable Error (PE) of correlation coefficient is an old measure of testing of reliability of an observed correlation coefficient. The Probable Error of the correlation coefficient is the basis for the interpretation of its value.

PE is used in interpretation whether the calculated value of r is significant or not.

- If $r < PE$ then it is insignificant or there is no evidence of correlation.
- If $r > 6PE$ then, it is significant.
- If $PE < r < 6PE$ then, nothing can be concluded.

Standard Error of Estimate (SEE)

The standard error of estimate measures the variability around the line of regression. It also measures the accuracy of the estimated figures. The lesser the value of SEE of estimate the better is the model fitted. If standard error of estimate is Zero then there is no variation about the line and the correlation will be perfect.

T- Statistics

To test the validity of our assumption, if sample size is less than or equal to 30, t-test is used. For applying t-test in the context of small sample, first t value is calculated and compared with the table value of t at a certain level of significant for given degree of freedom. If the calculated value of t exceeds the table value, we know that the difference is significant at 5% level. But if t value is less than the concerning table value of the t, the different is not treated as significant.

Trend Analysis

The arrangement of Statistical data chronologically (according to occurrence of time) is known as time series and the statistical analysis of this chronological variation is termed as Trend Analysis. It helps to know the past behavior of data in certain span of time interval. On the basis of these past trends, one can make plan in forthcoming days. This Least square method is the most popular and widely used mathematical method of measuring trend. This is frequently used for future prediction. There are various types of curves that may be used to describe the given data but in this text, an attempt has been made to discuss only the fitting of linear trend by the least square method.

Let, the equation of Trend Analysis would be,

$$Y = a + bx$$

Where,

Y = the given value of the variable in time series. It is a dependent variable.

a = Intercept of trend line or y- intercept.

b = Slope of Trend Line.

x = Time variable.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation, analysis and interpretation of data collected by secondary sources in order to fulfill the objective. The researcher has already mentioned that the study has heavily based on secondary data. Secondary source includes official quotation of share prices, publication of SEBON and NEPSE, issue prospects and annual reports of respective companies. The financial as well as statistical tools are used for the comparison of financial indicators. Also the correlation and regression analysis of the sample firm is calculated and data are presented in a systematic tabulated form.

4.1 Presentation and Analysis of Secondary Data:

4.1.1 Market Price per Share (MPS)

Market price of share is that value of stock, which can be received by firm or equity holders selling it in capital market. The capital market determines MPS. In this analysis, MPS is calculated by taking the average of the highest and the lowest market price of NEPSE Index. The market price per share depicts the perception of the market relating to the performance of a company. MPS is the current price at which the stock is traded.

Table 4.1
Analysis of Market Price per Share (MPS)

(In Rupees)

Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	1375	2350	1825	840	570	1392	645.90	46.40
EBL	2430	3132	2455	1630	1094	2148.2	710.11	33.06
NIBL	1729	2450	1388	705	515	1357.4	702.58	51.76
NSBL	1176	1511	1900	741	565	1178.6	489.68	41.55

(Source: Annual report of respective banks)

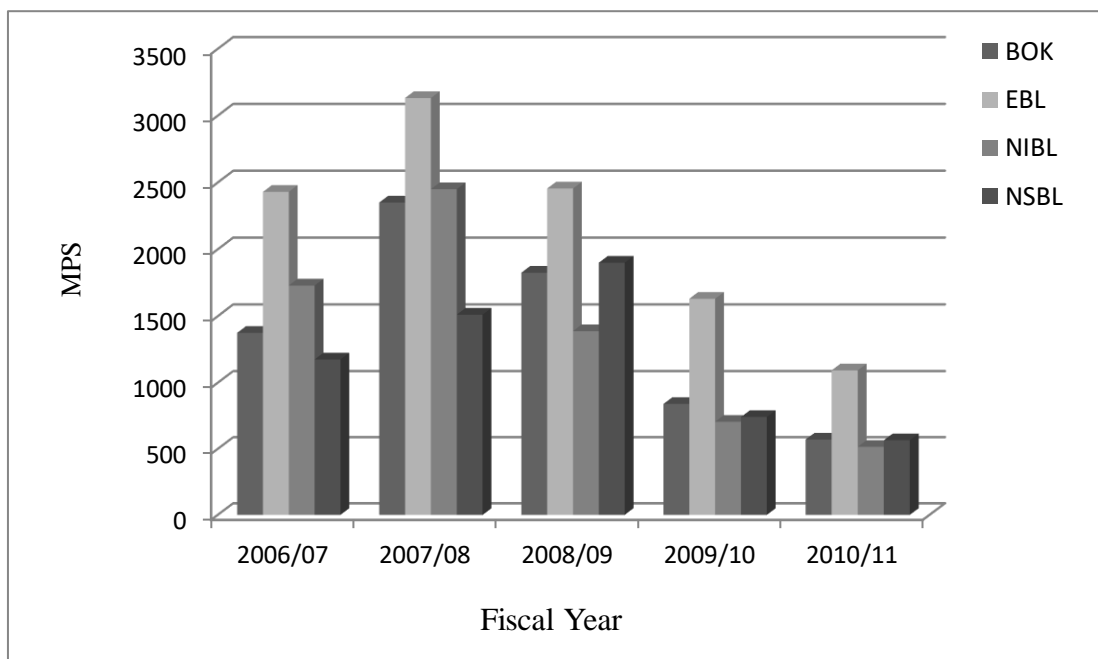
The table 4.1 shows the market price of the listed four commercial banks from FY 06/07 to 10/11. According to the table highest average market price is of EBL and

lowest of NSBL. BOK and NIBL are also performing well. BOK has average MPS of Rs 1392.00 which shows it is performing well. Its standard deviation is 645.90 and CV is 46.40%. MPS of BOK is fluctuating highly as it has 46.40% CV. MPS is increasing up to the FY 07/08 and it starts to decline heavily. Whereas EBL has average MPS of Rs 2148.20 which is the highest among the above mentioned four commercial banks. Its standard deviation is 710.11 and CV of EBL is 33.06% which means that there is not so high variation in MPS. MPS is increasing up to the FY 07/08 and it starts to decline.

MPS of NIBL is increasing continuously up to the FY07/08 and it starts to decline. Average MPS is Rs 1357.4 which shows that it is also performing well. Standard deviation of NIBL is 702.58 and its CV is 51.76% which is high among four banks. It shows that there is highly fluctuation on MPS of NIBL among the above mentioned four commercial banks due to its high CV. Average MPS of NSBL is of Rs 1178.60 which shows that it is also performing well. MPS of NSBL is in increasing trend up to the FY 08/09 and it starts to decline highly. Standard deviation of NSBL is 489.68 and its CV is 41.55% which shows that MPS has fluctuation of 41.55%.

Fig 4.1

Analysis of Market Price per Share (MPS)



According to the figure 4.1, performance of EBL is very good. MPS of EBL is highest on fiscal year 2007/08 due to its higher demand. MPS of all the above four commercial banks is increasing during the beginning years then starts to decline.

4.1.2 Earning Per Share (EPS)

Normally the performance and achievement of business organization are measured in terms of earning capacity to generate earning. Higher earning shows the higher strength while lower earning shows weaker strength of business organization. So, higher the EPS means better the position in stock market.

Table 4.2
Analysis of Earning Per Share (EPS)

(In Rupees)

Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	43.50	59.94	54.68	43.08	44.51	49.14	6.89	14.02
EBL	78.42	91.82	99.99	100.16	83.18	90.71	8.77	9.67
NIBL	62.57	57.87	37.42	52.55	48.84	51.85	8.59	16.57
NSBL	39.35	28.33	36.18	23.69	24.85	30.48	6.22	20.41

(Source: Annual reports of respective banks)

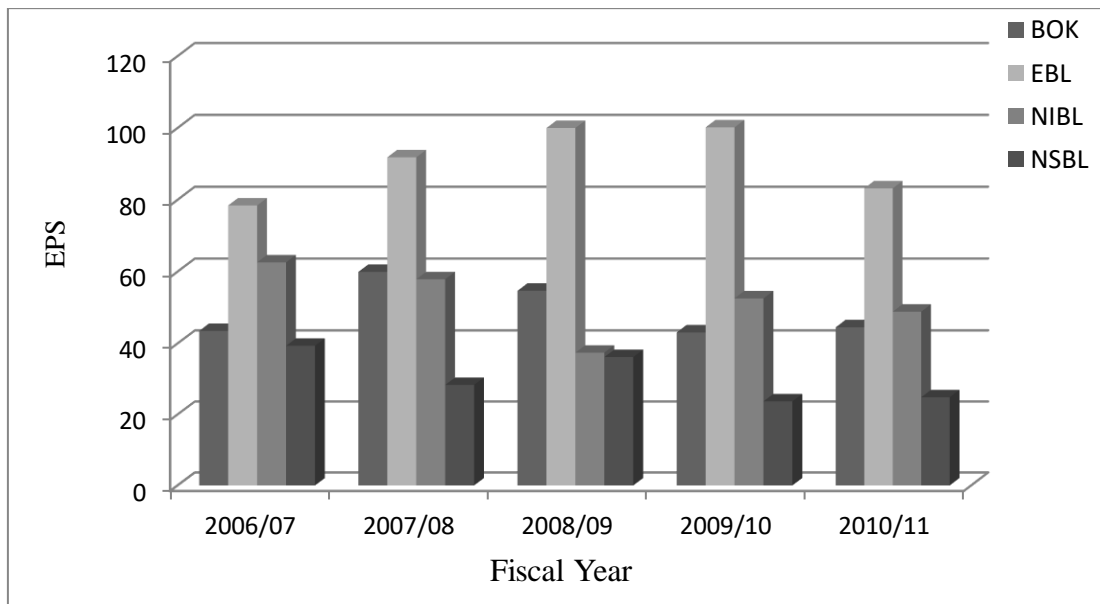
The table 4.2 shows the earning per share of the four listed banks from the year 06/07 to 10/11. It is clear that EBL has the highest average EPS of Rs 90.71 with its standard deviation 8.77 and 9.67% CV which shows that it has very less fluctuation of EPS. EPS of EBL is in growing trend until four years and is in decreasing trend in the last five years. So EBL has better performance among these four banks. whereas NSBL has the lowest average EPS of Rs 30.48 only with its standard deviation 6.22 and 20.41% CV which indicates that there is 20.41% fluctuation in EPS of the bank. The fluctuation on EPS of NSBL is the highest among these four banks and the fluctuation is also up and down.

BOK has average EPS of Rs 49.14 and its standard deviation is 6.89 and CV is 14.02%. There is not more fluctuation in EPS of BOK. EPS of BOK is increasing

continuously up to the FY 08/09 but in the FY 09/10 it has decreased to Rs 43.08 and it has slightly increased in the latest year. And NIBL has average EPS of Rs 51.85. Its standard deviation is 8.59 and its CV is 16.57%. It indicates 16.57% fluctuation in EPS which means there is not more fluctuation in EPS of NIBL but the fluctuation is decreasing at first than it starts to increase and again it starts to decrease.

Without considering the rate of fluctuation the analysis of EPS cannot be completed. For this we can observe the co-efficient of variation (CV). It can be observed that the CV of the banks ranges from 9.67% to 20.41%. This implies that there is some fluctuation in the EPS of these banks which demonstrates that performance is not consistent. Hence we can conclude that average EPS is highest and CV is lowest of EBL among these four banks, so that performance of EBL is good than these four mentioned banks.

Fig 4.2
Analysis of Earning Per Share (EPS)



The figure 4.2 shows EPS of four listed banks at which EPS of EBL is highest on every fiscal year. So EBL has better performance among these four banks.

4.1.3 Dividend Per Share (DPS)

Dividend per share (DPS) is that amount, which is paid to common shareholders on a per share basis. DPS shows what exactly do the ordinary shareholders receive. It is

calculated by dividing the dividend provided to equity shareholders by the total number of equity shares.

Table 4.3
Analysis of Dividend Per Share (DPS)

(In Rupees)

Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	20.00	2.11	7.37	15.00	16.75	12.25	6.55	53.47
EBL	10.00	20.00	30.00	40.00	50.00	30.00	14.14	47.13
NIBL	5.00	7.50	20.00	25.00	25.00	16.50	8.60	52.12
NSBL	12.59	0.00	2.11	5.00	5.00	4.94	4.26	86.23

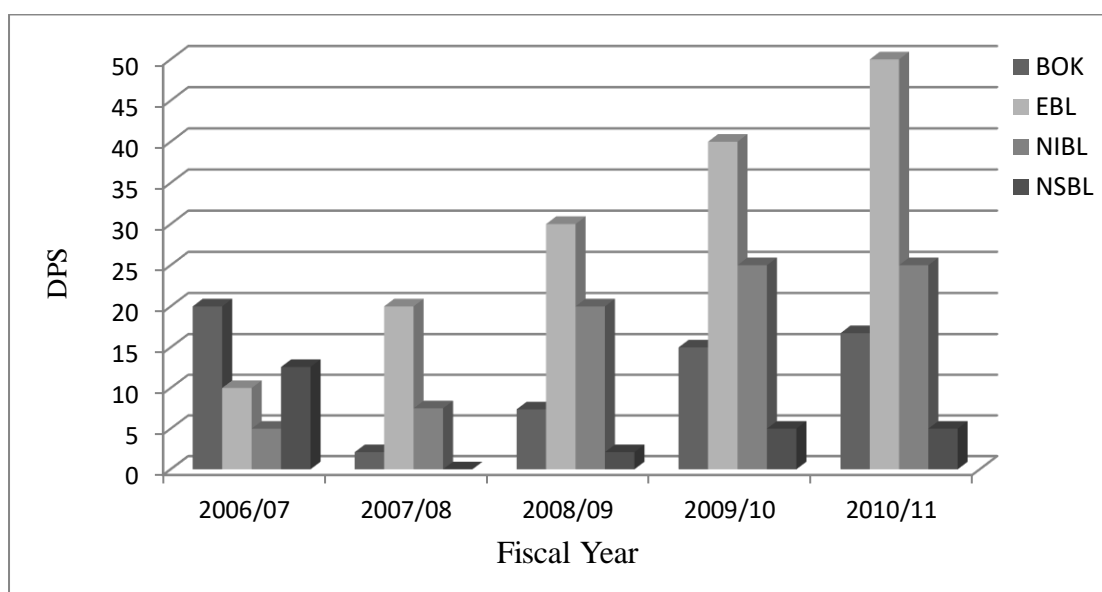
(Source: Annual reports of respective banks)

The table 4.3 shows the dividend per share of four listed commercial banks from the year 06/07 to 10/11. It is clear to see that average DPS of EBL is the highest, i.e. Rs 30.00 with its standard deviation 14.14 and 47.13 CV, which shows that it has also high fluctuation and average DPS of NSBL is the lowest, i.e. 4.94 with its standard deviation 4.26 and 86.23% CV which means its DPS is highly inconsistent. It has not paid dividend in FY 07/08. In comparison to dividend of above five years it has paid highest dividend in FY 06/07, i.e. Rs.12.59. It has low average DPS and high CV among four listed banks

Whereas BOK has a moderate dividend per share of Rs 12.25 in average; it has standard deviation of 6.55 and CV of BOK is 53.47% i.e. it has high fluctuation in DPS. DPS is decreasing in the FY 07/08 and it is in the increasing trend further. NIBL has average DPS of Rs 16.50. Its standard deviation is 8.60 and CV is 52.12%, which shows that there is high fluctuation in DPS of NIBL.

In an average all the above listed banks except NSBL are providing good dividend to its shareholders. Investors invest their money and want maximum return from it so DPS is also one of the indicators of evaluating the return. DPS of EBL is increasing continuously.

Fig. 4.3
Analysis of Dividend Per Share



According to the figure 4.3, DPS of EBL is increasing continuously which shows its better performance among four banks. NSBL does not pay any dividend on fiscal year 2007/08.

4.1.4 Dividend Payout Ratio (DPR)

Dividend payout ratio (DPR) indicates the percentage of actual earnings of the bank received by the ordinary shareholders. It is calculated by dividing the dividend per share to ordinary share holders by the earning per share (EPS).

Table 4.4
Analysis of Dividend Payout Ratio

(In Percentage)

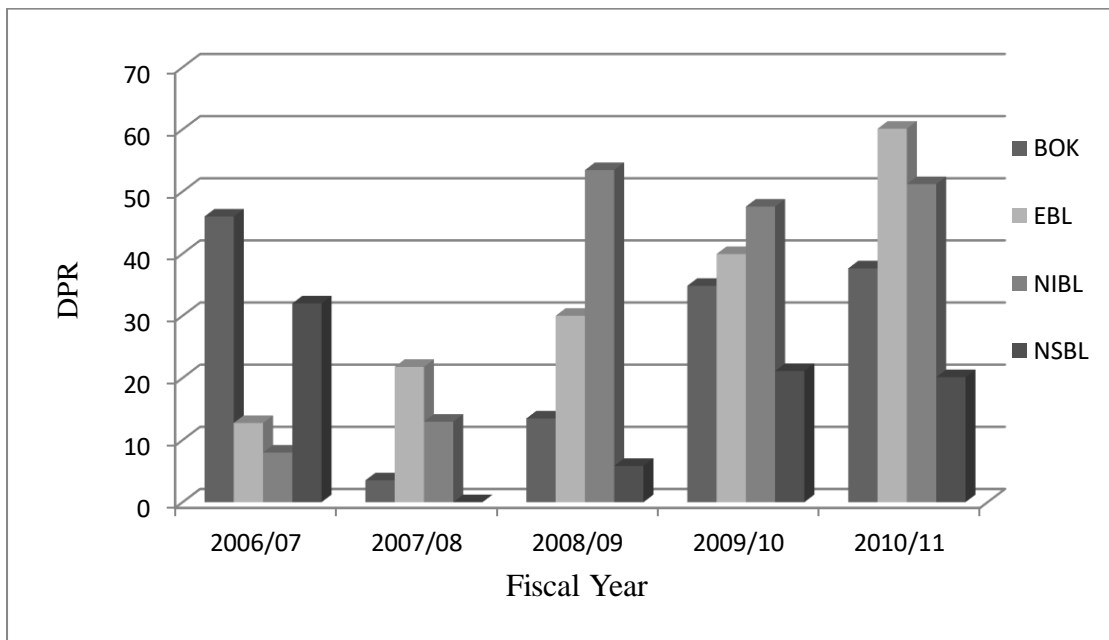
Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	45.98	3.52	13.48	34.82	37.63	27.09	15.93	58.80
EBL	12.75	21.78	30.00	39.94	60.11	32.92	16.30	49.51
NIBL	7.99	12.96	53.45	47.57	51.19	34.63	19.88	57.41
NSBL	31.99	0	5.83	21.11	20.12	15.81	11.47	72.55

(Source: Annual report of respective banks)

The table 4.4 shows the dividend pay-out ratio (DPR) of four listed commercial banks from the year 06/07 to the year 10/11. During the period of study, BOK has an average DPR of 27.09%. Its standard deviation is 15.93 and its CV is 58.80% which shows a less consistent behavior of dividend payment by BOK. Everest Bank Ltd. has an average DPR of 32.92% during the period of study. It means that it generally pays 32.92% of its earning to its shareholders in form of dividend. The standard deviation of DPR is 16.30 whereas the coefficient of variation is 57.41% which denote the fluctuating nature of DPR of EBL. Average DPR of NIBL from FY 06/07 to 10/11 is 34.63%. Its standard deviation is 19.88 and CV is 57.41% which also shows a less consistent behavior of dividend payment by NIBL. An average DPR of 15.81% of NSBL indicates that it generally pays out 15.81% of its earning as dividend. NSBL has fluctuating trend in its dividend payment. The standard deviation is 11.47 and coefficient of variation is 72.55%. The CV indicates that the DPR of NSBL highly fluctuated during the period of study.

The above calculation table 4.4 shows that NIBL has the highest average DPR i.e. 34.63% where as NSBL has the lowest average DPR i.e.15.81%. It is clear that BOK, EBL and NIBL are paying high dividend to its shareholders. But NSBL bank has retained most of its earning for future investment.

Fig 4.4
Analysis of Dividend Payout Ratio



According to the figure 4.4 DPR of EBL is increasing continuously and DPR of others banks is in fluctuation.

4.1.5 Dividend Yield (DY)

DY for a stock relates the annual dividend to share price. Typically, companies with good growth potential retain a high proportion of earnings and have a low dividend yield, whereas more matured industries pay out high portion of their earnings as dividend and retain low proportion of earning and have a relatively high dividend yield. Dividend Yield is calculated as dividing dividend per share by market price per share.

Table 4.5
Analysis of Dividend Yield

(In percentage)

Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	1.45	0.09	0.40	1.79	2.94	1.33	1.02	76.69
EBL	0.41	0.64	1.22	2.45	4.57	1.86	1.53	82.26
NIBL	0.29	0.31	1.44	3.55	4.85	2.09	1.82	87.08
NSBL	1.07	0.00	0.11	0.67	0.88	0.55	0.42	76.36

(Source: Annual reports of respective banks)

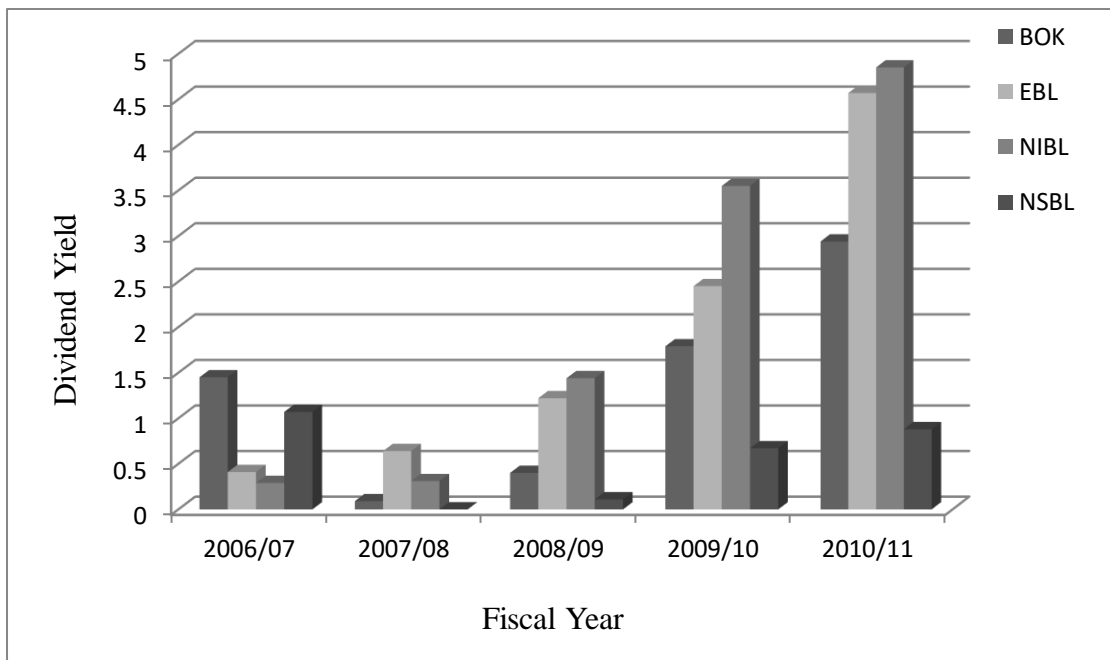
The table 4.5 shows the dividend yield of listed commercial banks for the period of five years from the FY 2006/07 to 2010/2011. The DY of BOK ranges between 0.40% and 2.94% during the period of study. During this period, the average DY is 1.33%. The standard deviation of DY of BOK under the period of study is 1.02. The CV of 76.69% indicates that the fluctuation of DY of BOK is more variable. The average DY of EBL during this period of study is 1.86%. The Standard deviation of DY is 1.53 whereas the coefficient of variation is 82.26% which indicate a high fluctuation in the DY of the bank.

Whereas NIBL has an average DY of 2.09% which is the highest among listed four commercial banks and its CV shows that there is a fluctuation of 87.08% in DY of NIBL, which is the highest fluctuation among four listed commercial banks. And

NSBL has an average DY of 0.55% with a standard deviation of 0.42. The DY ranges between 0.00% and 1.07%. It means that NSBL does not pay any dividend on FY 2007/08. The coefficient of variation shows that there is a fluctuation of 76.36% in DY of NSBL. NSBL is not in better position in respect of DY. NSBL has lowest dividend yield in comparison to other banks.

Hence from the table 4.5, it can be said that the average DY of NIBL is the highest and that of NSBL is the lowest. The standard deviation of NIBL is the highest and NSBL is the lowest. The coefficient of variation of these banks shows a high level of fluctuation in the DY. In comparison, NIBL has the less consistent DY among the selected banks which is increasing continuously, EBL is also in increasing trend but BOK and NSBL is in zigzag.

Fig 4.5
Analysis of Dividend Yield



The figure 4.5 shows that dividend yield of the banks are greater on the fiscal year 2010/11 due to decrease on market price heavily.

4.1.6 Earning Yield (EY)

Earning Yield is a financial ratio relating to earning per share to the market share price at a particular time. It measures the earning in relation to market value of the share. It gives some idea that of how much an investor is earning for his money.

Table 4.6
Analysis of Earning Yield (EY)

(In percentage)

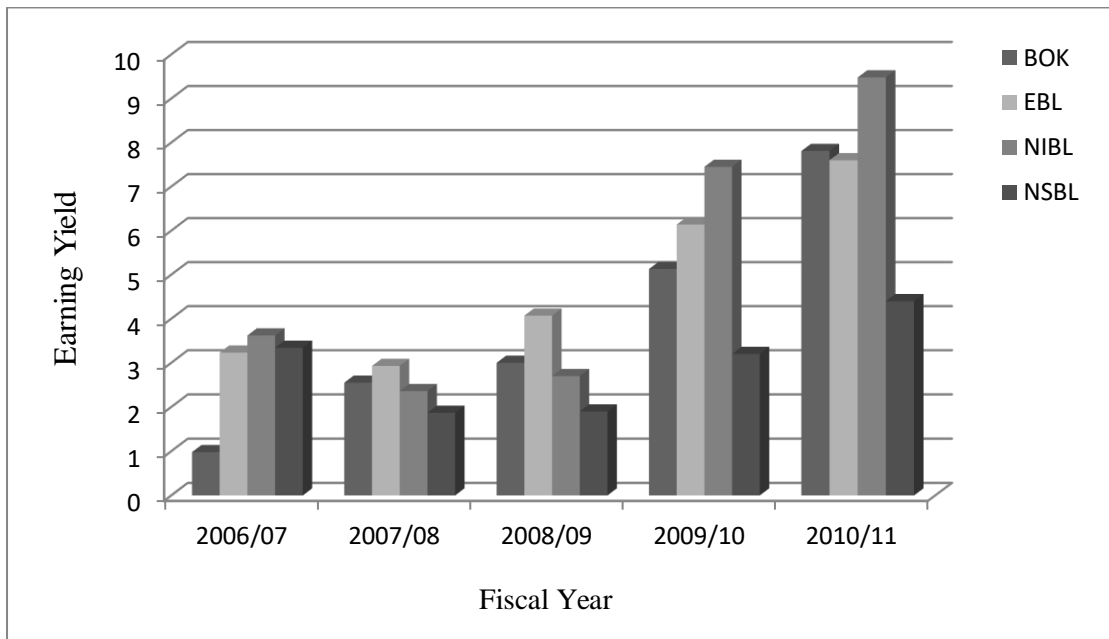
Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	0.98	2.55	3.00	5.13	7.81	3.89	2.36	60.67
EBL	3.23	2.93	4.07	6.14	7.60	4.79	1.80	37.58
NIBL	3.62	2.36	2.70	7.45	9.48	5.12	2.83	55.27
NSBL	3.34	1.87	1.90	3.20	4.40	2.94	0.96	32.65

(Source: Annual reports of respective banks)

The table 4.6 shows average EY of 3.89% with the standard deviation of 2.36 is seen for Bank of Kathmandu (BOK). The highest and the lowest EY are 7.81% and 0.98% respectively. The coefficient of variation is 60.67% during the period of study which shows that it is less consistent. The average EY of EBL during the period of study is 4.79%. It is within the range of 7.60 and 2.93. The standard deviation of EY is 1.80 whereas the coefficient of variation is 37.58%. The coefficient of variation in EY of EBL indicates that there is moderate fluctuation during this period.

The average EY of NIBL is 5.12% noted during the period of study. The standard deviation of the EY is 2.83 and the coefficient of variation of 55.27% indicating that there is a less consistent in the EY of NIBL whereas NSBL has an average EY of 2.94%. The standard deviation is 0.96 and coefficient of variation is 32.65% which indicates that there is moderate fluctuation during the period. Hence the table 4.6 concludes that NIBL has the highest average EY and NSBL has the lowest. The CV indicates that among the selected banks, BOK have the less consistency in its earning yield where as the earning yield of NSBL has more homogeneous.

Fig 4.6
Analysis of Earning Yield (EY)



The figure 4.6 shows the highest earning yield of four listed banks on the fiscal year 2010/11 due to decrease on market price per share heavily.

4.1.7 Price Earnings Ratio (P/E)

Price Earnings Ratio represents the amount which the investors are willing to pay for each rupee of the firm's earnings. It reflects the price currently paid by the market for each rupee of currently reported earnings per share. The P/E ratio measures investor's expectation and market appraisal of the performance of the firm.

Table 4.7
Analysis of Price Earnings Ratio (P/E Ratio)

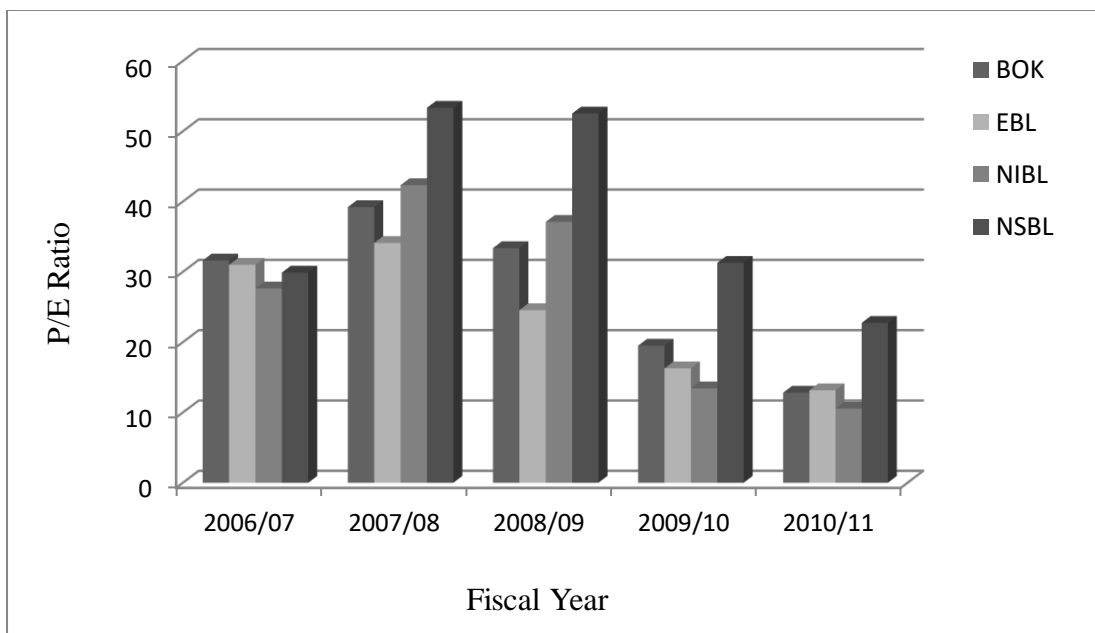
Bank	Fiscal year					Mean	S.D.	C.V.
	2006/07	2007/08	2008/09	2009/10	2010/11			
BOK	31.61	39.21	33.37	19.50	12.81	27.30	9.68	35.46
EBL	30.99	34.11	24.55	16.27	13.15	23.81	8.11	34.06
NIBL	27.63	42.33	37.10	13.42	10.54	26.20	12.57	47.98
NSBL	29.89	53.34	52.52	31.28	22.74	37.95	12.57	33.12

(Source: Annual report of respective banks)

The table 4.7 shows the price earnings ratio of listed four commercial banks. BOK has an average P/E ratio of 27.30. The standard deviation is 9.68 and coefficient of variation is 35.46%. The CV indicates that P/E ratio of BOK is less homogeneous i.e. moderate fluctuation. An average P/E Ratio of 23.81 has been noted during the period of study for EBL. The standard deviation of the P/E Ratio is 8.11. The CV of 34.06% indicates that there is moderate consistent in the P/E Ratio of EBL. And NIBL has an average P/E ratio 26.20, ranging between 42.33 and 10.54. The standard deviation is 12.57 and CV is 47.98% which indicates that there is more variable on P/E ratio. NSBL has an average P/E ratio of 37.95, ranging between 53.34 and 22.74 during the period of study. The standard deviation of 12.57 and the CV of 33.12% indicate fluctuation of 33.12% in the P/E ratio during this period which indicates the moderate fluctuating nature in P/E ratio for NSBL.

Hence the table 4.7 concludes that NSBL has the highest average P/E Ratio and EBL has the lowest. The CV indicates that among the banks under study during the period, NIBL has the less consistency in P/E ratio whereas the P/E ratio of NSBL is more stable.

Fig 4.7
Analysis of Price Earnings Ratio



The figure 4.7 shows that NSBL has greater P/E ratio among four listed banks on every fiscal year due to its lesser EPS than other banks.

4.1.8 Correlation Analysis

The correlation analysis is a technique used to measure the closeness of the relationship between the variables. It helps us in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number which indicates to what extent two variables are related with each other. The correlation coefficient shows the relationship between two variables. Its value ranges from -1 for perfect negative correlation up to +1 for perfect positive correlation. Here we have calculated the relationship between EPS and MPS, MPS and DPS and EPS and DPS.

4.1.8.1 Correlation between EPS and MPS

The correlation coefficient between EPS and MPS as calculated in Appendix III is summarized below.

Table 4.8
Correlation Coefficient between EPS and MPS

Bank	r	r ²	PE	6PE	Remarks
BOK	0.90	0.81	0.06	0.36	Significant
EBL	0.11	0.01	0.30	1.8	Insignificant
NIBL	0.40	0.16	0.25	1.5	Undefined
NSBL	0.64	0.41	0.18	1.08	undefined

(Source: Appendix iii)

The Table 4.8 helps to depict the relationship between Earning Per Share (EPS) and Market Price Per Share (MPS) of above four commercial banks from the year 2006/07 to 2010/11. The correlation coefficient (r) between EPS and MPS of all the banks are positive which indicates the positive relationship between EPS and MPS. It means that the MPS increases with the increase in EPS. BOK is highly positive having coefficient of correlation 0.90, NIBL and NSBI are moderately positive having coefficient of correlation 0.40 and 0.64 respectively and EBL is poorly positive having coefficient of correlation 0.11.

In the case of BOK, coefficient of determination is 0.81, which means 81% of the variation in the dependent variable has been explained by the independent variable.

PE measures the reliability of the observed correlation coefficient. Similarly, considering the value of 'r' i.e. 0.90 and comparing it with 6PE i.e. 0.36, we can find it is greater than the value of 6PE, which reveals that value of 'r' is significant or there is significant relationship between EPS and MPS. Coefficient of determination of EBL is 0.01, which means 1% variation in the dependent variable has been explained by the independent variable. In EBL 'r' is less than PE, so its value of 'r' is insignificant i.e. there is no significant relationship between EPS and MPS. In the case of NIBL and NSBL 16% and 41% respectively of the variation of the dependent variable has been explained by the independent variable. In both banks 'r' is greater PE but less than 6PE i.e. $PE < r < 6PE$, so it is undefined.

After analyzing, the conclusion it can be drawn that in BOK there is significant relationship between EPS and MPS because 'r' is greater than 6PE. Where as in case of EBL, 'r' is less than PE, so there is no significant relationship between EPS and MPS. And in case of NIBL and NSBL 'r' is greater than PE but less than 6PE so the relation is undefined.

4.1.8.2 Correlation Coefficient between DPS and MPS

The correlation coefficient between DPS and MPS is calculated as follows:

Table 4.9
Correlation Coefficient between DPS and MPS

Bank	r	r ²	PE	6PE	Remarks
BOK	-0.81	0.66	0.10	0.90	Insignificant
EBL	-0.83	0.69	0.09	0.54	Insignificant
NIBL	-0.88	0.77	0.07	0.42	Insignificant
NSBL	-0.36	0.13	0.26	1.56	Insignificant

(Source: Appendix iii)

Table 4.9 presents the correlation coefficient between MPS and DPS of listed four commercial banks. Correlation coefficients of all four banks are negative which indicates that there is inverse relationship between MPS and DPS. It means when there is increase in DPS; it leads to decrease in the MPS and vice-versa. Among these

BOK, EBL and NIBL has the highest degree of negative relation and NSBL has moderate degree of negative relation. These four banks have issued right share due to which the Market Price of the Share decreased but as the bank's DPR is high, its DPS increased. So there seemed the negative relationship between the MPS and DPS.

The coefficient of determination (r^2) of BOK, EBL, NIBL, and NSBL indicates there is 66%, 69%, 77% and 13% variation in the dependent variable has been explained by the independent variable respectively. In the case of listed all four commercial banks, $r < PE$ which indicates that there is insignificant relationship between MPS and DPS.

4.1.8.3 Correlation Coefficient between EPS and DPS

The correlation coefficient between EPS and DPS is as follows:

Table 4.10
Correlation Coefficient between EPS and DPS

Bank	r	r ²	PE	6PE	Remarks
BOK	-0.97	0.94	0.018	0.11	Insignificant
EBL	0.29	0.08	0.28	1.68	Undefined
NIBL	-0.67	0.45	0.17	1.02	Insignificant
NSBL	0.46	0.21	0.24	1.44	Undefined

(Source: Appendix iii)

The table 4.10 shows the correlation coefficient between EPS and DPS, according to the table BOK and NIBL have negative correlation between EPS and DPS. In which BOK is highly negative correlated and NIBL is moderately negative correlated. The value of coefficient of determination of BOK is 0.94 which means 94% of the variation in the dependent variable has been explained by the independent variable. Similarly considering the value of 'r' i.e.-0.97 and comparing it with PE i.e.0.94, we can find 'r' is less than PE, which indicates there is insignificant relationship between EPS and DPS. Due to the issuance of right share EPS of the bank decreased but bank tried to provide good return to the investors and increased its DPR which lead to the increase in DPS. So, when EPS of BOK and NIBL decreased, its DPS increased and the correlation between the two became slightly negative.

In the case of EBL and NSBL, there is positive correlation between EPS and DPS but EBL has low degree of positive correlation i.e.0.29 and NSBL has moderate degree of positive correlation i.e. 0.41, which indicates that increase in EPS leads to increase in DPS and vice-versa. EBL and NSBL have 0.08 and 0.21 coefficient of determination respectively. Since the value of 'r' of EBL and NSBL is greater than PE but less than 6PE, so the relationship is undefined.

4.1.9 Simple Line Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationship between two or more variables and so make estimate of one variable on the basis of the other variable. Regression is the line which gives the best estimate of one variable for any given value of the other variable. The regression line of Y on X estimate the most probable values of Y for given values of X.

The regression equation of Y on X expressed as $Y = a + bX$

Where,

X is independent variable

Y is dependent variable

a and b are parameters of the line

To find out the exact relationship between different variable simple regressions analysis has been done and results of the analysis have been shown on the table.

4.1.9.1 Regression Analysis between EPS and MPS

To describe the average relationship between EPS and MPS, we have performed the regression analysis of all the four banks. In this analysis, we have assumed MPS as depended variable and EPS as the independent variable. The summary of the regression analysis is presented in the table below.

The table 4.11 shows the regression analysis between EPS and MPS of four listed commercial banks. From this analysis we have found the slopes or regression coefficient (b) of four banks BOK, EBL, IBL and NSBL are positive which indicates the positive relationship exists between EPS and MPS. In other words, one unit increase in EPS leads to 84.25, 9.15, 33.06 and 50.62 unit increase in MPS of BOK, EBL, NIBL and NSBL respectively. Intercept (a) is the average value of MPS when

its EPS is equal to zero. According to the data, intercept of three banks BOK, EBL and NSBL found to be negative where as intercept of NIBL is found to be positive.

Table 4.11
Regression Analysis between EPS and MPS

Bank	Intercept (a)	Slope (b)	SEE	S_b	T value	Remarks
BOK	-2748.09	84.25	365.90	23.75	3.550	Significant
EBL	1318.24	9.15	910.88	46.46	0.197	Insignificant
NIBL	-356.96	33.06	829.61	43.19	0.766	Insignificant
NSBL	-364.39	50.62	484.01	34.79	1.460	Insignificant

(Source: Appendix iv)

Also, the calculated value of t (3.550) of BOK is higher than the tabulated value of t (3.182) at 5% level of significance and 3 degree of freedom, which indicates that the result is statistically significant. For rest of the banks EBL, NIBL and NSBL it is insignificant due to the lower value of calculated value of t than tabulated value.

4.1.9.2 Regression Analysis between DPS and EPS

Regression Analysis of DPS and EPS is calculated in the table below. We have taken the data of the above four banks where EPS is taken as independent variable and DPS as dependent variable.

Table 4.12
Regression Analysis between DPS and EPS

Bank	Intercept (a)	Slope (b)	SEE	S_b	T value	Remarks
BOK	57.34	-0.9176	2.21	0.143	6.42	Significant
EBL	-12.15	0.4646	17.48	0.892	0.52	Insignificant
NIBL	51.30	-0.6711	8.24	0.429	1.56	Insignificant
NSBL	-4.76	0.3182	4.88	0.351	0.91	Insignificant

(Source: Appendix iv)

According to the table 4.12, slope (b) of EBL, and NSBL are positive which indicates there is positive relationship. In other words, when there is increase in one unit of EPS it leads to the 0.4646 and 0.3182 unit increase in DPS of EBL and NSBL respectively.

Whereas slope or regression coefficient (b) is negative on BOK and NIBL which indicates that there is negative relationship. It means increase in one unit of EPS leads to 0.9176 and 0.6711 unit decrease in DPS of BOK and NIBL respectively. Intercept (a) is the average value of DPS at which EPS is equal to zero. There is positive value of intercept on BOK and NIBL where as there is negative value of intercept on EBL and NSBL.

The test of t-statistics helps to conclude that relationship between DPS and EPS of BOK is significant as its calculated t-value (6.42) is higher than that of the tabulated t-value (3.182) at 5% level of significance on 3 degree of freedom. In case of other banks it is insignificant due to lower calculated value than tabulated value.

4.1.9.3 Regression Analysis between DPS and MPS

MPS is taken as dependent variable and DPS as independent variable. In this basis regression analysis of MPS and DPS is calculated and it is presented in the table below.

Table 4.13
Regression Analysis between DPS and MPS

Bank	Intercept (a)	Slope (b)	SEE	S _b	T value	Remarks
BOK	2372.55	-80.07	486.70	33.23	2.41	Insignificant
EBL	3400.40	-41.74	509.59	16.11	2.59	Insignificant
NIBL	2548.32	-72.18	424.48	22.07	3.27	Significant
NSBL	1383.20	-41.42	589.61	64.75	0.64	Insignificant

(Source: Appendix iv)

The table 4.13 shows that the slope of all four listed bank is negative which indicates that there is negative relationship between DPS and MPS. In other words, it indicates that when there is one unit increase in the DPS it leads to 80.07, 41.74, 72.18 and 41.42 unit decreases in the MPS of the four mentioned banks BOK, EBL, NIBL and NSBL respectively and vice-versa. Intercept (a) is the average value of MPS when DPS is equal to zero. Intercept of all four banks are found to be positive.

The calculated t-value of relationship between DPS and MPS is lower than that the tabulated t-value (3.182) at 5% level of significance on 3 degree of freedom for all four banks so that there is found to be insignificant.

4.1.10 Trend Analysis

Trend analysis is an analysis of financial ratio over time used to determine the pattern of growth. Trend Analysis informs about the future expected values of studied variables. It gives a glimpse of future expected value if the same growth level is achieves. This information is crucial for management to make decision regarding future. This method is widely used in practice.

4.1.10.1 Trend Analysis of MPS

Trend analysis of MPS shows the pattern of market price per share growth. It may be positive or negative. Trend helps the investor to estimate its future market value of share and make decision regarding purchase or sale of the share.

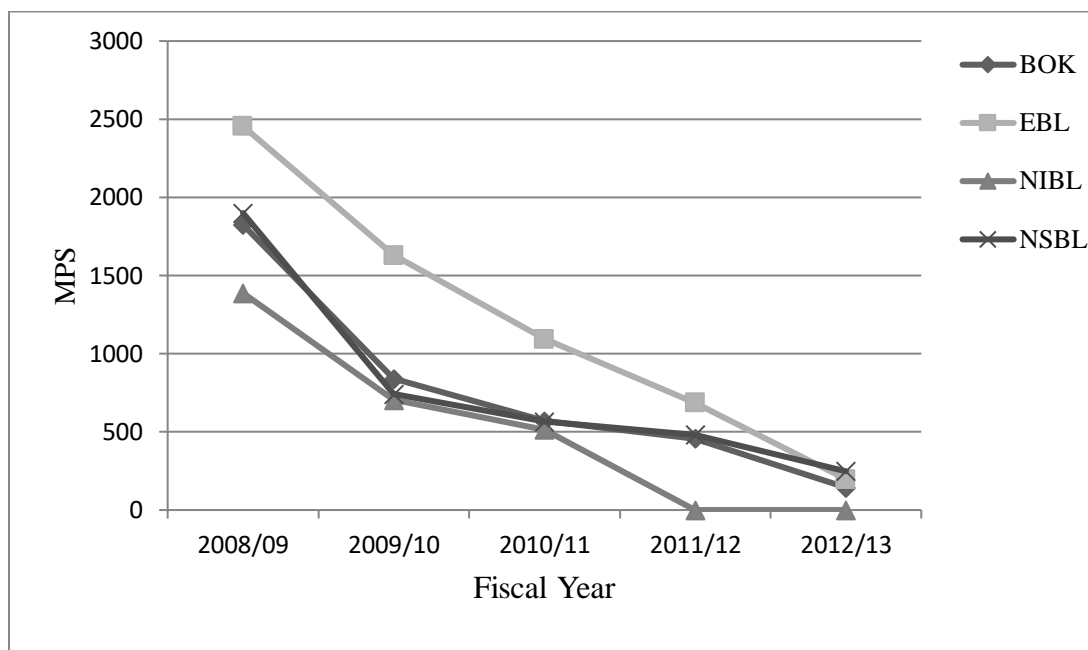
Table 4.14
Trend Analysis of MPS

Bank	Intercept (a)	Slope (b)	Current MPS			Forecasted MPS	
			2008/09	2009/10	2010/11	2011/12	2012/13
BOK	1392	-312	1825	840	570	456	144
EBL	2148.2	-487.6	2455	1630	1094	685.4	197.8
NIBL	1357.4	-489.4	1388	705	515	0	0
NSBL	1178.6	-232.7	1900	741	565	480.5	247.8

(Source: Appendix v)

Table 4.14 shows the trend analysis of the MPS of the four commercial banks for the two years ahead on the base of current five years trend. MPS of all the commercial banks are found to be decreasing. We have here forecasted the MPS of year 11/12 and 12/13. MPS of NIBL is seemed to be zero on FY 11/12. If MPS is going on this trend it should seem to be negative but MPS cannot be negative so it is zero. The slope of all the listed banks are in negative sign, if the intercept can cover its value it forecast MPS be positive but when intercept cannot cover its value the forecast MPS be zero.

Figure 4.8
Trend Analysis of MPS



The figure 4.8 shows the trend analysis of the MPS of four listed commercial banks with two years ahead. There is decreasing trend on MPS of all listed banks. If this trend is followed we have forecast that MPS of NIBL seemed to be zero on fiscal year 2011/12.

4.1.10.2 Trend Analysis of EPS

Trend analysis helps to predict the future. Here EPS of the four mentioned banks are forecasted with the help of trend analysis. Future EPS of the banks are shown in the table 4.15 as follows:

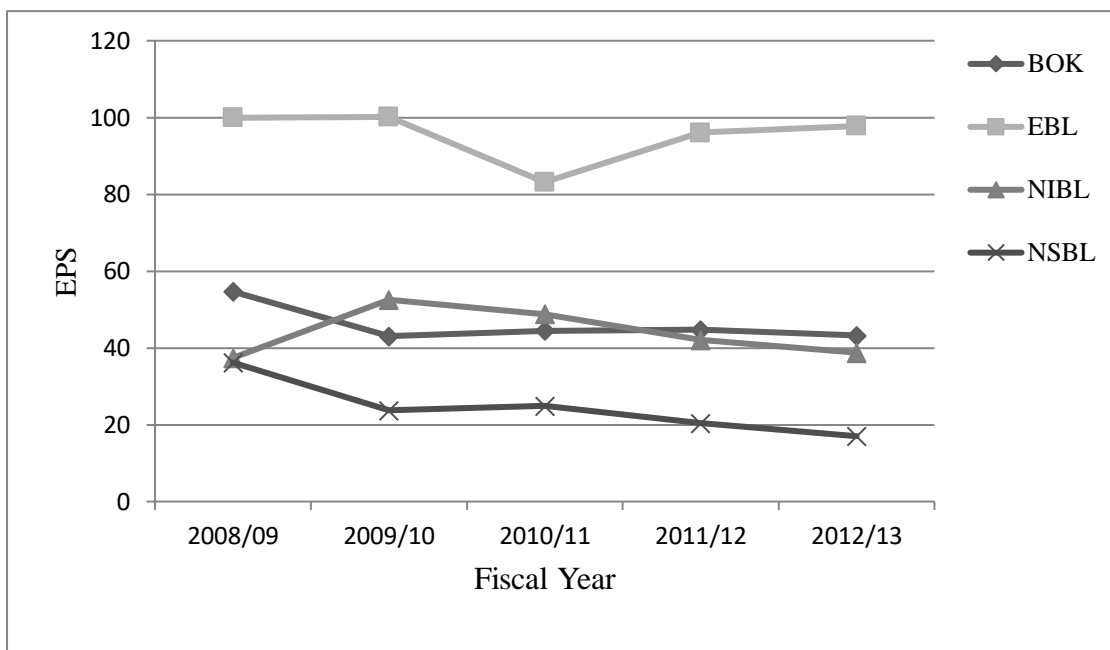
Table 4.15
Trend Analysis of EPS

Bank	Intercept (a)	Slope (b)	Current EPS			Forecasted EPS	
			2008/09	2009/10	2010/11	2011/12	2012/13
BOK	49.14	-1.484	54.68	43.08	44.51	44.69	43.20
EBL	90.71	1.786	99.99	100.16	83.18	96.07	97.85
NIBL	51.85	-3.278	37.42	52.55	48.84	42.02	38.74
NSBL	30.48	-3.364	36.18	23.69	24.85	20.39	17.02

(Source: Appendix v)

The table 4.15 shows the trend analysis of EPS or forecasted EPS for two years ahead, i.e. 2011/12 and 2012/13. Slope of BOK, NIBL and NSBL seems to be negative, so EPS of BOK, NIBL and NSBL are in decreasing trend. But the slope of EBL is positive so EPS of EBL is in increasing trend and it will be 97.85 on the FY 2012/13. Among the four listed commercial banks, the forecasted EPS of EBL is higher than others bank, so EBL is in a good financial position than others. And NSBL has low forecasted EPS. The following figure also shows the trend analysis of EPS in more descriptive form.

Fig 4.9
Trend Analysis of EPS



The figure 4.9 shows that EBL is in a good financial position than others due to its higher forecasted EPS among four listed banks. EPS of BOK, NIBL and NSBL are forecasted to decrease.

4.1.10.3 Trend Analysis of DPS

Future Dividend Per Share of the four listed commercial banks are forecasted with the help of Trend analysis. Summary of the forecasted DPS of the coming two years are presented in table 4.16 as:

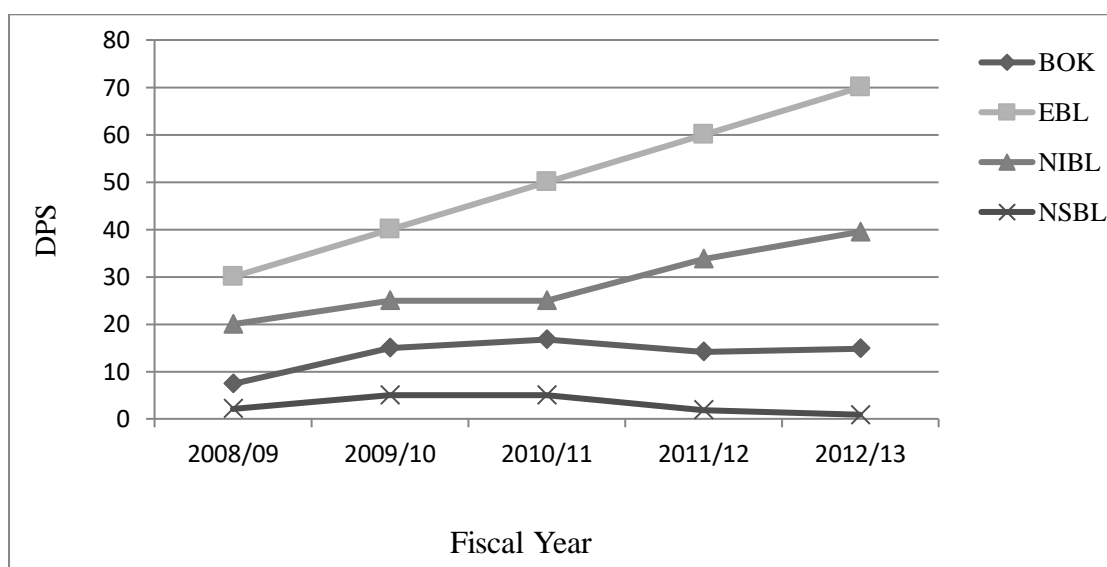
Table 4.16
Trend Analysis of DPS

Bank	Intercept (a)	Slope (b)	Current DPS			Forecasted DPS	
			2008/09	2009/10	2010/11	2011/12	2012/13
BOK	12.25	0.639	7.37	15.00	16.75	14.17	14.81
EBL	30.00	10.00	30.00	40.00	50.00	60.00	70.00
NIBL	16.50	5.75	20.00	25.00	25.00	33.75	39.50
NSBL	4.94	-1.018	2.11	5.00	5.00	1.886	0.87

(Source: Appendix v)

The table 4.16 shows the trend analysis of DPS of the two years ahead up to the fiscal year 2012/13. Slope of BOK, EBL and NIBL is positive which shows forecasted DPS seems to be in increasing trend. Slope of NSBL is negative which shows forecasted DPS to be in decreasing trend and become 0.87 on fiscal year 2012/13. Among four listed commercial banks, EBL has high forecasted DPS which shows it is in a good financial position. Forecasted DPS of NIBL is also quiet high, but forecasted DPS of BOK is medium and forecasted DPS of NSBL is low and becomes zero. Investors may be glad in future also with the dividend paid by some of these commercial banks but it seems BOK and NSBL's shareholders will not be satisfied with the dividend of their banks with respect to others.

Fig 4.10
Trend Analysis of DPS



According to the figure 4.10, DPS of EBL and NIBL are forecasted to increase and of BOK and NSBL are forecasted to decrease on the coming years.

4.1.10.4 Trend Analysis of DPR

Dividend Payout Ratio of the four commercial banks is forecasted for the two coming years, which is shown in table 4.17 as follows:

Table 4.17
Trend Analysis of DPR

Bank	Intercept (a)	Slope (b)	Current DPR			Forecasted DPR	
			2008/09	2009/10	2010/11	2011/12	2012/13
BOK	27.09	1.46	13.48	34.82	37.63	31.47	32.93
EBL	32.92	11.288	30.00	39.94	60.11	66.78	78.07
NIBL	34.63	12.101	53.45	47.57	51.19	70.93	83.06
NSBL	15.81	-0.263	5.83	21.11	20.12	15.02	14.76

(Source: Appendix v)

Fig 4.11
Trend Analysis of DPR

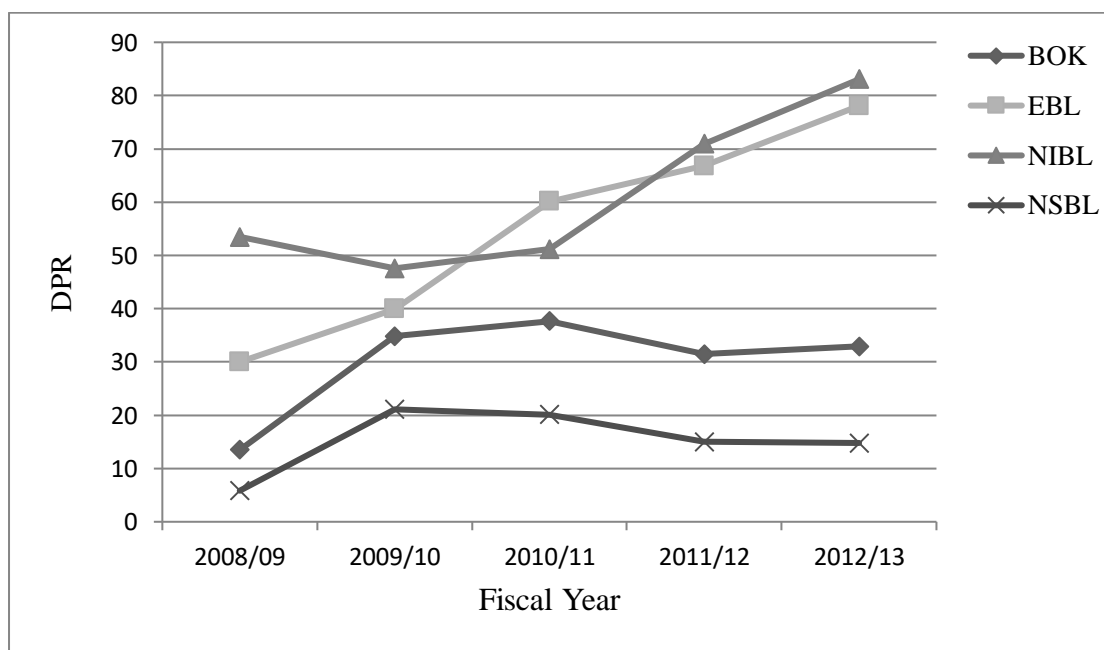


Table 4.17 and figure 4.11 presented above predicts of the DPR of the commercial banks for the coming two years 2011/12 and 2012/13. DPR of BOK, EBL and NIBL are in increasing trend. It will be increasing continuously in the coming years. But NSBL will go on distributing fewer dividends to its investors and retain more for the internal use of the bank, as per our calculation. Among the four commercial banks forecasted DPR of NIBL is high and forecasted DPR of NSBL is low.

4.2 Presentation and Analysis of Primary Data

Questionnaire for the collection of primary data was distributed to 50 respondents from different fields. After the distribution of list of following questionnaires to different respondents, following result is achieved.

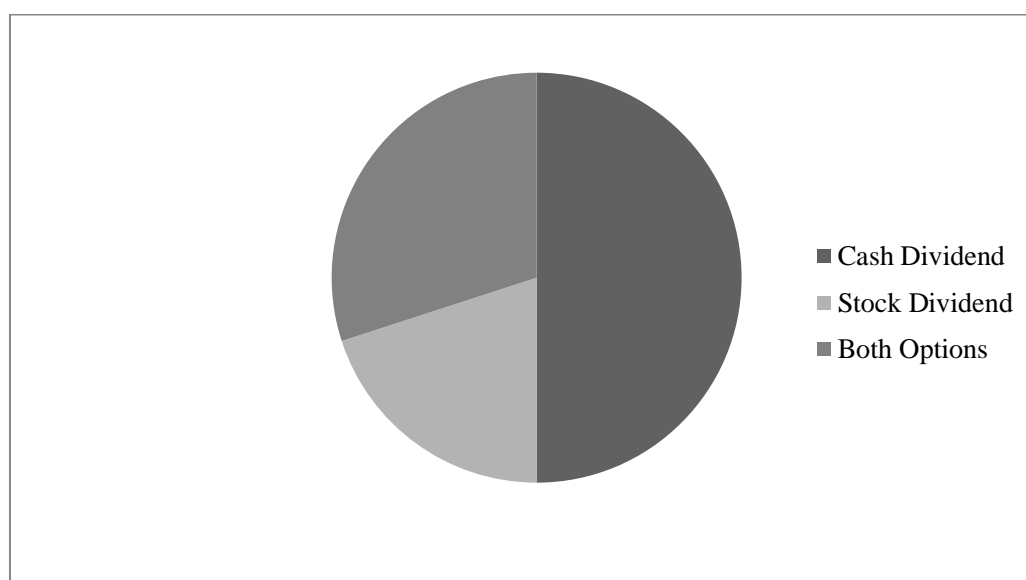
- ❖ **For the preference of the dividend option, following answer is collected from the respondents.**

Table 4.18
Preference of Dividend Option

Option	No. of respondent	% of respondent
Cash dividend	25	50
Stock dividend	10	20
Both	15	30

(Source: field survey, 2012)

Figure 4.12
Preference of Dividend Option



The table 4.18 and figure 4.12 shows most of the respondents wished for cash dividend. Among the 50 respondents, 25 i.e. 50% wanted cash dividend and only 10 respondents i.e. 20% wanted for stock dividend. Both options were wished by only 15 respondents i.e. 30%.

❖ **Factors considered by the investors while selecting the Financial institutions is summarized below:**

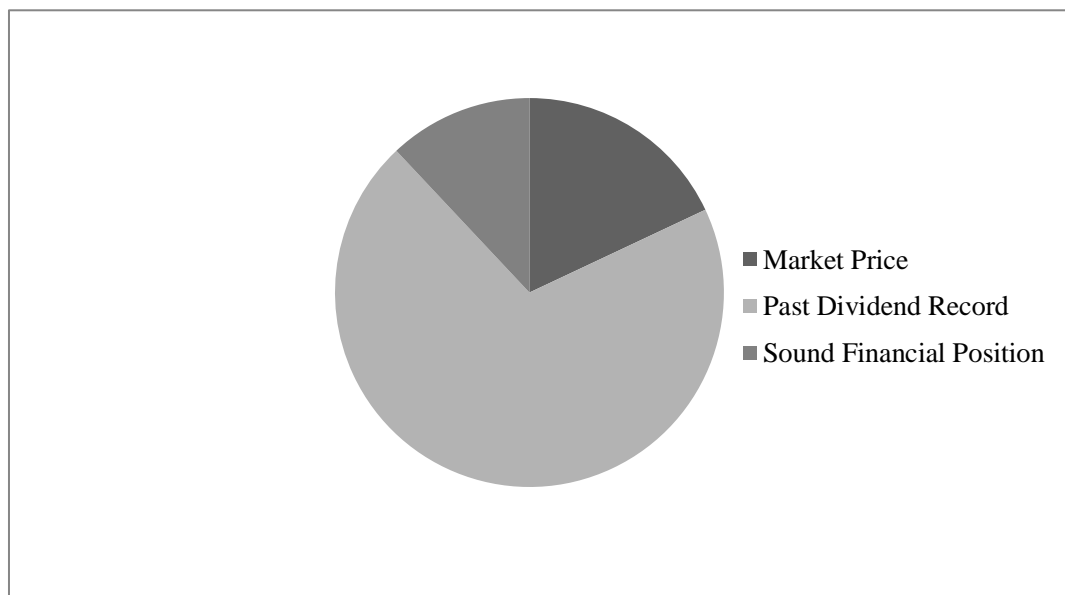
Table 4.19
Factors considered by the investors

Option	No. of respondent	% of respondent
Market price	9	18
Past dividend record	35	70
Sound financial position	6	12

(Source: Field Survey, 2012)

The table 4.19 and figure 4.13 shows that most of the investors, 70% as per this survey, considered the past dividend record of the firm while investing in them. Among the 50 respondents, 9 respondents i.e. 18% considered market price and 6 respondents i.e. 12% considered the sound financial position while investing.

Figure 4.13
Factors considered by the investors



- ❖ **Factors should be considered while adopting dividend policy, is answered as follows:**

Table 4.20

Factors to be considered while adopting dividend policy

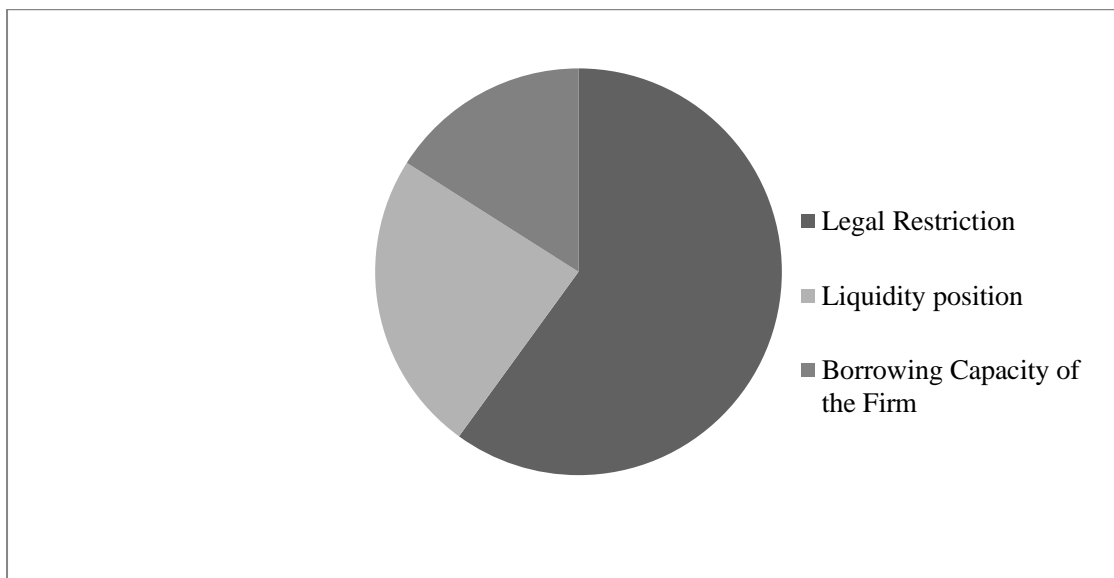
Option	No. of respondent	% of respondent
Legal Restriction	30	60
Liquidity Position	12	24
Borrowing capacity of the firm	8	16

(Source: Field Survey, 2012)

The table 4.20 and figure 4.14 reflects that 60% of the respondents consider the legal restriction to be adopted while declaring the dividend. Similarly, 12 respondents i.e. 24% of them replied liquidity position and 16% replied borrowing capacity of the firm should be considered before declaring the dividend.

Fig 4.14

Factors to be considered while adopting dividend policy



- ❖ **Reasons for investing in the share capital are answered as follows:**

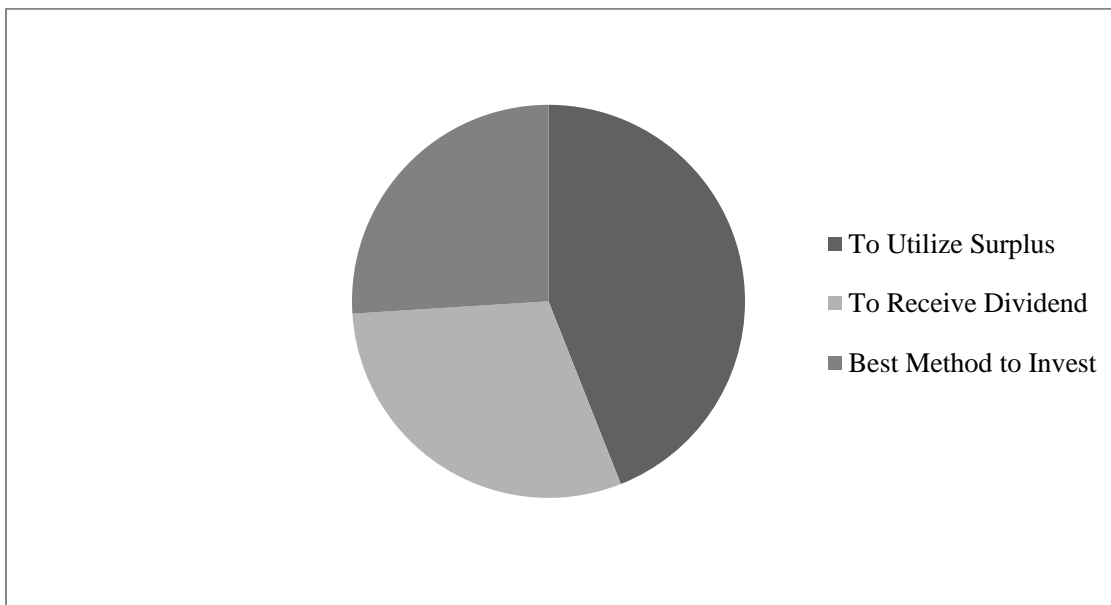
According to the table 4.21 and figure 4.15, among the 50 respondents, 44% invested to utilize their surplus money. 15 of them invested their money in the share capital in want of dividend and remaining 26% thought it is the best method to invest.

Table 4.21
Reasons for investing in the share capital

Option	No. of respondent	% of respondent
To utilize surplus	22	44
To receive dividend	15	30
Best method to invest	13	26

(Source: Field survey, 2012)

Fig 4.15
Reasons for investing in share capital



❖ **The respondents are asked what the company should do if it does not have cash to pay cash dividend. The answer is as:**

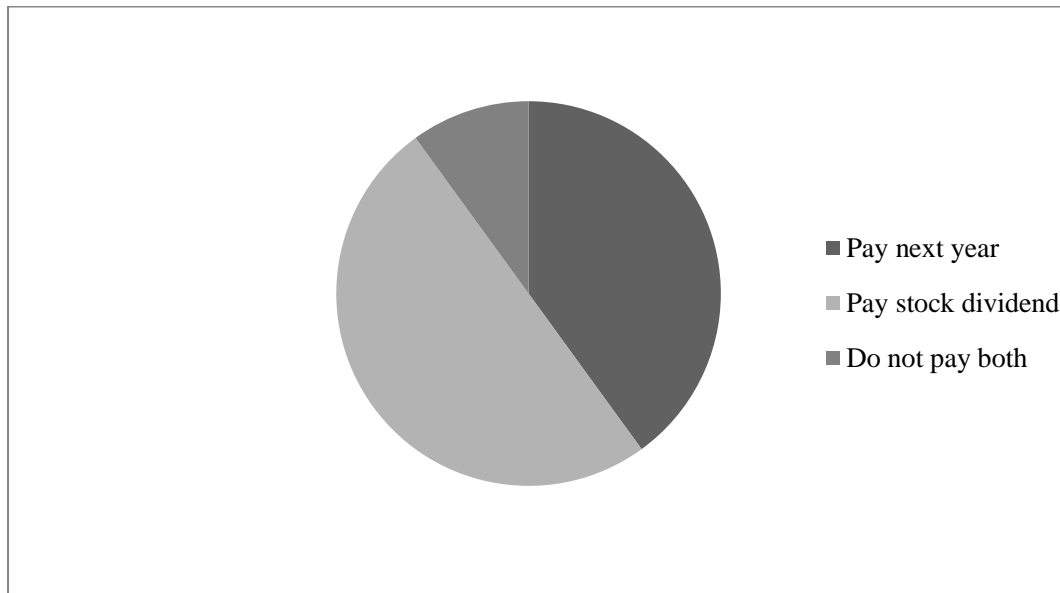
Table 4.22
Suggestion if there is no cash to pay dividend

Option	No. of respondent	% of respondent
Pay next year	20	40
Pay stock dividend	25	50
Do not pay both	5	10

(Source: Field survey, 2012)

The table 4.22 and figure 4.16 reflects that 40% of the respondents want the company to pay dividend next year. 25 of the respondents i.e. 50% want the company to pay stock dividend instead of cash dividend and remaining 5 respondents i.e.10% says not to pay both on this year.

Fig 4.16
Suggestions if there is no cash to pay dividend



❖ **Dividend Practices Followed by Bank:**

To examine for what dividend policy practices followed by Nepalese commercial bank, the respondents are on this subject. The responses obtained from them are presented in table 4.23 as:

Table 4.23
Dividend Practices Followed by Bank

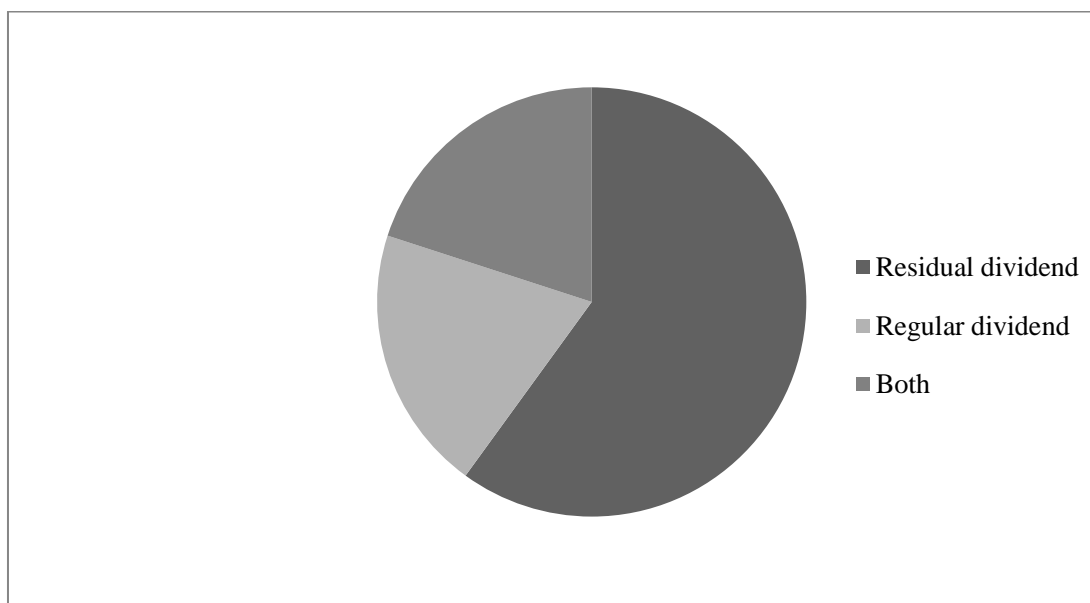
Option	No. of respondent	% of respondent
Residual dividend	30	60
Regular dividend	15	20
Both	15	20

(Source: Field survey, 2012)

From the table 4.23 and figure 4.17, it is clear that dividend practices followed by banks in Nepal is 60% of respondents said that payment of dividend after financing

in appropriate investment opportunities i.e. residual dividend policy, 20% of respondents said regular dividend payment and remaining 20% select both option. Hence it can be concluded that dividend practices followed by bank is payment of dividend after financing in appropriate investment opportunities.

Fig 4.17
Dividend Practices Followed by Bank



❖ **Major Motive of Cash Dividend Distribution:**

To examine for what is the major motive of cash dividend on dividend policy of the commercial banks, the respondents are on this subject. The responses obtained from them are presented.

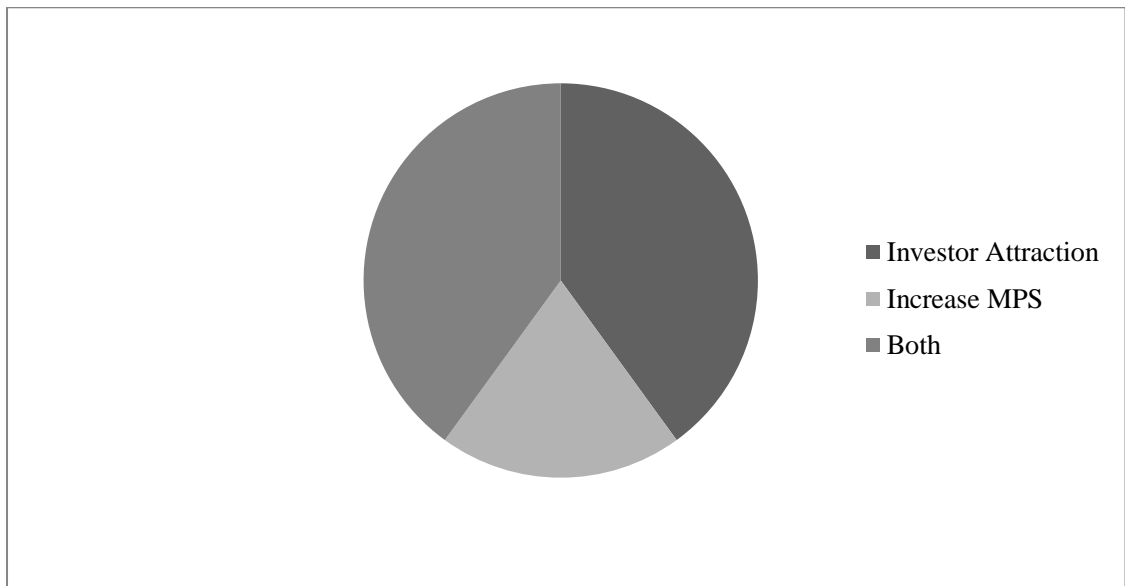
Table 4.24
Major Motives of cash Dividend

Option	No. of Respondent	% of Respondent
Investor attraction	20	40
Increase MPS	10	20
Both	20	40

(Source: Field survey, 2012)

From the table 4.24 and figure4.18, it is clear that 40% of respondent's major motive of cash dividend is for investor attraction. Only 20% respondents replied that increase the market value of firm and remaining 40% replied both.

Fig 4.18
Major Motives of cash Dividend



❖ **Effects of Dividend Policy on Market Price Per Share:**

To examine for what is the effects of dividend policy on market price per share of the commercial banks to pay the dividend each year, the respondents are on this subject.

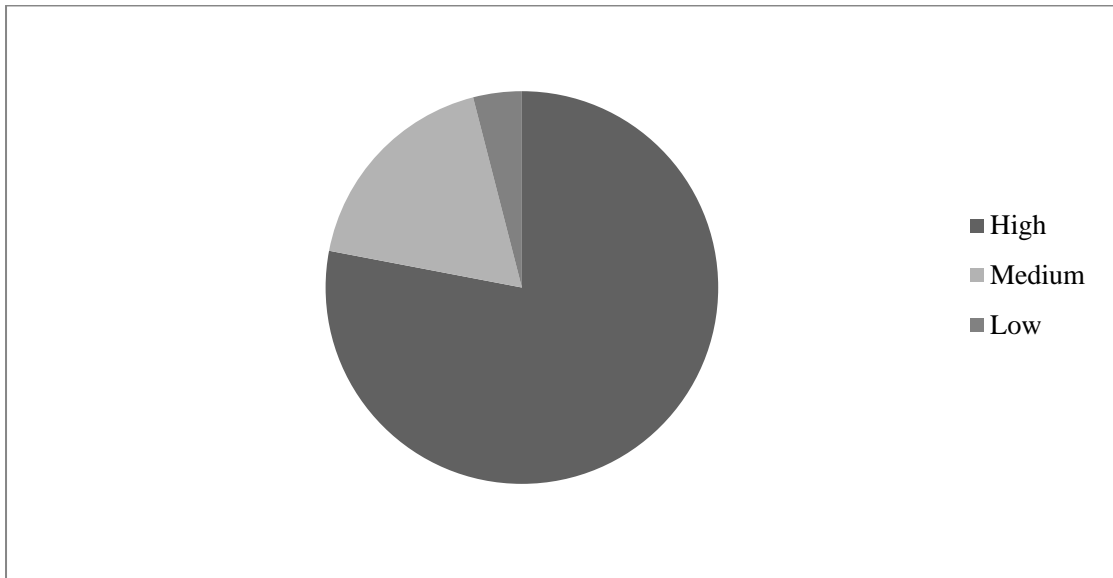
Table 4.25
Effect of Dividend Policy on MPS

Option	No. of Respondent	% of Respondent
High	39	78
Medium	9	18
Low	2	4

(Source: Field survey, 2012)

From the table 4.25 and figure 4.19, it is clear that 78% of respondents replied that market price per share is highly affected by dividend policy, 18% of respondents medium affect and 4% respondents think low affect. Hence it can be concluded that effects of dividend policy is highly on MPS.

Fig 4.19
Effect of Dividend Policy on MPS



4.3 Major Findings:

4.3.1 Major Findings of the Secondary Data

The major findings of secondary data are listed below:

- Market Price Per Share (MPS) of these four listed banks is now in decreasing trend. EBL is now in highest position in case of MPS. Banks have more difficult to get better reputation in the market due to their decreasing MPS.
- Earnings Per Share (EPS) is the total earning earned in a share. EBL has good EPS along with to some consistency in it. Some fluctuations are seen in the EPS of the listed commercial banks which may effect in the image of the firm.
- Dividend Per Share (DPS) is highly fluctuating in every commercial banks. EBL distributed Rs 30 as dividend in average which is the highest among these four banks. And DPS of EBL is in increasing trend. NSBL has not been able to distribute dividend in fiscal year 07/08. It shows inconsistency in their dividend which is not marked good.
- Dividend Payout Ratio (DPR) is the ratio paid to the shareholders after retaining by the firms for further investment. None of the above banks are providing high dividend. Most of the earnings are retained by themselves as retained earnings. NIBL has previously paid highest DPR i.e. 34.63% in average but the fluctuation is 57.41%.
- Positive relationship is found between the EPS and MPS of the all above listed commercial banks. These are highly correlated and any change in EPS leads to the

positive change in MPS also. But the relationship between MPS and DPS are found to be negative which indicates inverse relationship between DPS and MPS. Relationship between EPS and DPS is negative for BOK and NIBL and positive for EBL and NSBL.

- Trend of MPS for future two years is in decreasing state of all four banks. Similarly in case of EPS EBL is in increasing trend but other three banks are in decreasing trend. DPS of NSBL is decreasing but for other three banks have increasing trend. DPR NSBL is also predicted to decrease but others is predicted to increase.

4.3.2 Major Findings of the Primary Data

The major findings of the primary data are as follows:

- 50% of the investors have invested their money in the firms in want of regular cash return. 20% want stock dividend and 30% want both the options i.e. cash as well as stock dividend.
- Among the 50 respondents, 35 investors evaluate the past dividend record of the firms before investing in them. 18% analyze the market price and 12% compare the sound financial position of the company before investing.
- According to the primary data collected it is found that most of the firms (60%) consider the legal restrictions while adopting the dividend policy. Liquidity position of the firm and borrowing capacity of the firm is also to be considered while adopting the dividend policy according to the respondents.
- About 44% of the investors are investing their money in share capital to utilize their money. Some of them invest it in want of dividend. Few of the i.e. 26% people think investing in the share capital is the best method to invest.
- In case the firm does not have sufficient cash to pay dividend, investors want the company to distribute the stock dividend instead of cash dividend. Some of them also want the company to pay the cash dividend next year.
- According to the survey, mostly investor suggests that dividend practice followed by banks is dividend after financing i.e residual dividend.
- According to the survey, maximum investors think that firms pay cash dividend to attract more new investors or also both i.e. to increase the market value of their stock and to attract more investors in the view of others.
- According to the survey, more investors i.e. 78% investors replied that MPS is highly affected by the dividend policy.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, three major aspects of the study are discussed. In the beginning all the findings have been summarized and some conclusions have been drawn up based on findings. Then, the gaps found and factors that caused those gaps are also presented. This chapter is very important in the following senses:

- a. It shows a glance of the study what was observed during research.
- b. It concludes the findings in an understandable form.
- c. It provides some suggestion to the concerned authority as well as practitioner and academicians. The recommendation is presented in this chapter considering the major findings and gaps found there too.

5.1 Summary

Dividend is the return earned by the shareholders from their investment in the firm. Thus investors also determine the performance of the firms from the dividend provided by them. So every firm has to determine its dividend payout ratio in an effective way. This dividend distribution is very important factor to any organization for its effective goal achievement and to satisfy its shareholders. Good dividend is an effective way of attracting new investors. Market value of the share is also affected by the dividend decision of the company. How much amount is to be retained in the company is also determined after the dividend decision is made. It means total sum of the earning is divided into dividend for the shareholders and retained earnings for the company itself.

So, dividend policy is an important policy for any firm as it determines the return for shareholders and also the earning for firm itself. The fund retained by the firm sometimes couldn't be used in case of lack of investment opportunities. In such a situation, distribution of dividend to the shareholders is taken as wise decision as shareholders can have greater investment opportunities to employ elsewhere.

Dividends as returns to shareholders are paid on annual basis. Firms pay dividend in two ways: - cash and stock. Various factors such as legal rules, liquidity position,

earnings, investment need, and tax position of stockholders influence the dividend policy. Banks can follow different dividend payout schemes depending upon the influencing factors. Cash dividend is the widely used form of dividend payment. Few banks pay stock dividends too.

This research mainly aims at analyzing the dividend policies of different listed banks and identifies the regularity of dividend distribution of different listed banks. Here four banks have been chosen as sample to complete the study. The study is based on secondary data for a period of 06/07 to 10/11. To analyze the dividend payment practices of banks, different ratios have been calculated and interpreted. Instability of dividend and inconsistent dividend payout ratio are the mostly seen in Nepalese commercial banks and financial companies. In case of Nepal, only the banks and finance companies operating under Joint Venture are paying dividend more attractively than the banks and finance companies promoted by indigenous promoters. But we can say no companies have been able to follow the stable dividend policy. This study is mainly based on the study of the dividend practices of sampled banks. The dividend payout ratio of the companies in Nepal is also not fair. There is no any consistency in the dividend payment. Hence it is concluded that more or less the dividend policy depends on the earning per share of a company. The earnings per share and dividend per share having the positive relation may also impact on the market price of share.

5.2 Conclusion

The thesis includes both primary as well as secondary data. But the presentation and calculation part is mainly based on the secondary data. According to the analysis of the data presented above it can be concluded as follows:

- Banks performance are not too much well, they are in normal condition. Among them EBL is showing better performance.
- MPS of all listed banks start to decrease regularly.
- EPS of all these banks are also fluctuating highly at which EPS are in average. Among four commercial banks EBL has high average EPS.
- The distribution of dividend by these commercial banks is not regular and also not consistent. NSBL has not paid the dividend in FY 07/08.

- EBL and NIBL are increasing its DPS every year. Others two have fluctuations in DPS. Looking at the DPS of the banks we can said that investors may be satisfied with the dividend of EBL and NIBL, but they are not satisfied with dividend of BOK and NSBL that they are getting from their respective banks.
- It seems banks are retaining most of their earnings for their own investment and paying only few percentage of earning as dividend to their shareholders. This DPR is also not consistent for any of the above listed banks. Among which DPR of EBL is increasing regularly.
- The correlation between EPS and MPS of all banks are positive, which indicates that increase in EPS leads to increase in MPS and vice-versa. Similarly correlation between EPS and DPS are positive for EBL and NSBL, which indicates that increase in EPS leads to increase in DPS and negative for BOK and NIBL, which indicates that increase in EPS leads to decrease in DPS. Similarly correlation between MPS and DPS of all banks are negative, which shows negative relationship. PE of these correlation is also calculated to test whether the calculated value of r is significant or not.
- Trend analysis of MPS is decreasing heavily of all listed four commercial banks and trend analysis of EPS of EBL is seem to be increasing but other's seem to be decreasing which shows EBL is in good performance compared to others. Trend analysis of DPS and DPR of listed banks is in increasing trend except NSBL which provide some satisfaction to the investors.
- Finally on the basis of the secondary data, it can be concluded that EBL is more successful in gaining good position in the market than other banks. Other banks have also shown normal performance. Although MPS of all banks start to decrease, none of them have consistency in DPS and DPR. So shareholders may not be fully satisfied with them.
- Every bank has its own dividend practices. Such different policies have different kinds of effect. It means each banks and financial institutions do not have similar effect in its Market Prices of Share from their dividend practices.
- MPS of all banks are decreasing and their DPS is highly fluctuating. So it proves that other many qualitative and quantitative factors also play a great role in the determination of marker price of share. DPS is determined on the basis of EPS. EPS of the firm is divided into DPS and Retained Earnings, so if the firm wants to retain capital the DPS will be decreased instead of good earning of the firm. Thus it can be

concluded that DPS only is not the determining factor of the share price. Banks may provide bonus share, it leads to decrease in share price and dividend payout ratio will not be good, but in the market the reputation and image of that bank will be high.

5.3 Recommendations

This study is basically for the analyses of the dividend policy of different commercial banks. So, various aspects of the commercial banks have to be studied to come into the conclusion. All banks have their own resources and on the basis of those resources management try to get the optimal result. This study has tried to find out some real facts about dividend policy and other interrelated variables with dividend policy of different commercial banks. Based on the above summary and conclusions following recommendation have been provided hoping that these recommendations will be proved as a milestone to overcome the existing issues in this field.

- Shareholders should be given an opportunity to choose between the cash dividend, stock dividend and any other forms of dividend. So dividend declaration should be presented to the annual general meeting of shareholders for their approval. For this, banks first of all should make the investors well known about the advantages and disadvantages of different forms of dividends through different media.
- There are no any clear legal provisions about the payment of dividends in our country. So the government should act in favor of the investors. Legal rules should be made in order to protect the rights of the shareholders.
- Each and every company should provide the information regarding their activities and performance, so that investors can analyze the situation and invest their money in the best company.
- The information regarding the secondary market and the capital market is not flashed out. So the concerning body should timely provide all the information about this factor.
- The payment of dividend is highly fluctuating. There are no any consistencies in the dividend distribution which creates confusions and miss conceptions about the firm among the investors.
- Most the banks have had great fluctuation in DPS, EPS, DPR, Dividend Yield, Share Price and PE Ratio. The fluctuations should be controlled and the consistency in the variables has become most necessary.

- The government should encourage the establishment of organization to promote and to protect activities in favor of investors. Government should reduce the interference in the daily affairs of the organizations.
- Dividend policy of banks is not defined. They should define their dividend strategy clearly whether they are adopting stable dividend policy, constant payout ratio or low regular plus extra dividend policy.
- Bank should have target rate of earning and target payout ratio that will help companies to build good image in stock market and investors can also make good investment decision.
- Banks need to start some awareness program to make the investors known about the share price and dividend. It helps the banks to increase their investors and the image of the bank will also be increased.

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APPENDICES

Appendix I

Questionnaires

- 1) Which dividend option you would like to prefer?
 - a. Stock dividend
 - b. Cash dividend
 - c. Both Options

- 2) What factor you consider the most before buying stock of any Financial Institution?
 - a. Market price
 - b. Past dividend record
 - c. Sound Financial Position

- 3) What factors should be considered while adopting dividend policy?
 - a. Legal Restriction
 - b. Liquidity position
 - c. Borrowing capacity of the firm

- 4) Why do people invest in share capital?
 - a. To utilize surplus money
 - b. To receive dividend
 - c. This is the best method to invest

- 5) What do you suggest if the company has no cash to pay cash dividend?
 - a. Pay next year
 - b. Pay stock dividend
 - c. Do not pay both

- 6) What Dividend Policy was practiced by Nepalese commercial banks?
- a) Residual Dividend
 - b) Regular Dividend
 - c) Both options
- 7) What is the major motive of cash dividend by the banks?
- a) For investors attraction
 - b) To increase the market value of the firm s stock
 - c) Both option
- 8) How much is the effect of Dividend Policy on Market Price of stock?
- a) High
 - b) Medium
 - c) Low

Appendix II

Calculation of Mean (\bar{X}), Standard Deviation (SD) And Coefficient of variation (CV)

MPS of BOK

Year	MPS (X)	X ²
06/07	1375	1890625
07/08	2350	5522500
08/09	1825	3330625
09/10	840	705600
10/11	570	324900
Total	$\sum X = 6960$	$\sum X^2 = 11774250$

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{6960}{5} = 1392$$

$$\begin{aligned} \text{Standard Deviation } (\sigma) &= \sqrt{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N}\right)^2} \\ &= \sqrt{\frac{11774250}{5} - \left(\frac{6960}{5}\right)^2} = 645.90 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of variation (CV)} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{645.90}{1392} \times 100\% = 46.40 \end{aligned}$$

Similarly, calculation is done for MPS, EPS, DPS, DPR, DY, EY and P/E ratio for BOK, EBL, NIBL and NSBL.

Appendix III
Calculation of Correlation Coefficient, Coefficient of Determination
And Probable Error

Between EPS and MPS of BOK

EPS(X)	MPS(Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	xy	x^2	y^2
43.50	1375	-5.64	-17	95.88	31.81	289
59.94	2350	10.8	958	10346.40	116.64	917764
54.68	1825	5.54	433	2398.82	30.69	187489
43.08	840	-6.06	-552	3345.12	36.72	304704
44.51	570	-4.63	-822	3805.86	21.44	675684
$\Sigma X =$ 245.71	$\Sigma Y =$ 6960	$\Sigma x = 0$	$\Sigma y = 0$	$\Sigma xy =$ 19992.08	$\Sigma x^2 =$ 237.3	$\Sigma y^2 =$ 2085930

$$\bar{X} = \frac{\Sigma X}{N} = \frac{245.71}{5} = 49.14$$

$$\bar{Y} = \frac{\Sigma Y}{N} = \frac{6960}{5} = 1392$$

$$\text{Correlation Coefficient (r)} = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}} = \frac{19992.08}{\sqrt{237.3} \sqrt{2085930}} = 0.90$$

$$\text{Coefficient of Determination (r}^2\text{)} = 0.90 \times 0.90 = 0.81$$

Probable error (PE)

$$= 0.6745 \times \frac{1 - r^2}{\sqrt{N}} = 0.6745 \times \frac{1 - 0.81}{\sqrt{5}} = 0.06$$

Similarly calculation is done for EBL, NIBL and NSBL and can be written in table as:

Correlation Coefficient between EPS and MPS

Bank	r	r ²	PE	6PE	Remarks
BOK	0.90	0.81	0.06	0.36	Significant
EBL	0.11	0.01	0.30	1.8	Insignificant
NIBL	0.40	0.16	0.25	1.5	Undefined
NSBL	0.64	0.41	0.18	1.08	undefined

Between DPS and MPS of BOK

DPS(X)	MPS(Y)	x = X - \bar{X}	y = Y - \bar{Y}	xy	x ²	y ²
20	1375	7.75	-17	-131.75	60.06	289
2.11	2350	-10.14	958	-9714.12	102.82	917764
7.37	1825	-4.88	433	-2113.04	23.81	187489
15	840	2.75	-552	-1518	7.56	304704
16.75	570	4.50	-822	-3699	20.25	675684
ΣX = 61.23	$\Sigma Y =$ 6960	$\Sigma x=0$	$\Sigma y = 0$	$\Sigma xy=$ -17175.91	$\Sigma x^2 =$ 214.5	$\Sigma y^2 =$ 2085930

$$\bar{X} = \frac{\Sigma X}{N} = \frac{61.23}{5} = 12.25$$

$$\bar{Y} = \frac{\Sigma Y}{N} = \frac{6960}{5} = 1392$$

$$\text{Correlation Coefficient (r)} = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}} = \frac{-17175.91}{\sqrt{214.5} \sqrt{2085930}} = -0.81$$

$$\text{Coefficient of Determination (r}^2\text{)} = -0.81 \times -0.81 = 0.66$$

Probable error (PE)

$$= 0.6745 \times \frac{1 - r^2}{\sqrt{N}} = 0.6745 \times \frac{1 - 0.66}{\sqrt{5}} = 0.10$$

Similarly calculation is done for EBL, NIBL and NSBL and can be written in table as:

Correlation Coefficient between DPS and MPS

Bank	r	r ²	PE	6PE	Remarks
BOK	-0.81	0.66	0.15	0.90	Insignificant
EBL	-0.83	0.69	0.09	0.54	Insignificant
NIBL	-0.88	0.77	0.07	0.42	Insignificant
NSBL	-0.36	0.13	0.26	1.56	Insignificant

Between EPS and DPS of BOK

EPS(X)	DPS(Y)	x = X - \bar{X}	y = Y - \bar{Y}	xy	x ²	y ²
43.50	20	-5.64	7.75	-43.71	31.81	60.06
59.94	2.11	10.8	-10.14	-109.51	116.64	102.82
54.68	7.37	5.54	-4.88	-27.04	30.69	23.81
43.08	15	-6.06	2.75	-16.67	36.72	7.56
44.51	16.75	-4.63	4.50	-20.84	21.44	20.25
$\sum X =$ 245.71	$\sum Y =$ 61.23	$\sum x = 0$	$\sum y = 0$	$\sum xy =$ -217.77	$\sum x^2 =$ 237.3	$\sum y^2 =$ 214.5

$$\bar{X} = \frac{\sum X}{N} = \frac{245.71}{5} = 49.14$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{61.23}{5} = 12.25$$

$$\text{Correlation Coefficient (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{-217.77}{\sqrt{237.3} \sqrt{214.5}} = -0.97$$

$$\text{Coefficient of Determination (r}^2\text{)} = -0.97 \times -0.97 = 0.94$$

Probable error (PE)

$$= 0.6745 \times \frac{1 - r^2}{\sqrt{N}} = 0.6745 \times \frac{1 - 0.94}{\sqrt{5}} = 0.018$$

Similarly calculation is done for EBL, NIBL and NSBL and can be written in table as:

Correlation Coefficient between EPS and DPS

Bank	r	r ²	PE	6PE	Remarks
BOK	-0.97	0.94	0.018	0.11	Insignificant
EBL	0.29	0.08	0.28	1.68	Undefined
NIBL	-0.67	0.45	0.17	1.02	Insignificant
NSBL	0.46	0.21	0.24	1.44	Undefined

Appendix IV

Calculation of Regression Analysis

MPS on EPS for BOK,

Calculation of regression equation

EPS(X)	MPS(Y)	XY	X ²	Y ²	X - \bar{X}) ²
43.50	1375	59812.5	1892.25	1890625	31.81
59.94	2350	140859	3592.80	5522500	116.64
54.68	1825	99791	2989.90	3330625	30.69
43.08	840	36187.2	1855.89	705600	36.72
44.51	570	25370.70	1981.14	324900	21.44
$\sum X =$ 245.71	$\sum Y =$ 6960	$\sum XY =$ 362020.4	$\sum X^2 =$ 12311.98	$\sum Y^2 =$ 11774250	$\sum (X - \bar{X})^2 =$ 237.3

Let the regression equation of Y on X be

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

Where,

Y is dependent variable (MPS)

X is independent variable (EPS)

a is intercept of the line

b is Slope of the line

To find the values of a and b we have the following two normal equations.

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

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

Substituting the values in equation (ii) and (iii) we get,

$$6960=5a+245.71b.....(iv)$$

$$362020.4=245.71a+12311.98b.....(v)$$

Multiplying (iv) by 49.142 and subtracting from (v) we get,

$$362020.40=245.71a+12311.98b$$

$$342028.32=245.71a+12074.68b$$

$$1992.08=237.3b$$

$$\therefore b = \frac{1992.08}{237.3} = 84.25$$

Putting the value of b in equation (iv) we get,

$$6960=5a+245.71 \times 84.25$$

$$6960=5a+20701.07$$

$$\therefore a = \frac{6960 - 20701.07}{5} = -2748.09$$

$$\text{Standard Error of Estimate (SEE)} = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{N - 2}}$$

$$= \sqrt{\frac{11774250 - (-2748.09) \times 6960 - 84.25 \times 362020.4}{5 - 2}}$$

$$= \sqrt{133579.23} = 365.90$$

Standard Error of regression coefficient

$$(S_b) = \frac{SEE}{\sqrt{\sum(x - \bar{X})^2}} = \frac{365.90}{\sqrt{237.3}} = 23.75$$

$$|t|\text{value} = \frac{b}{S_b} = \frac{84.25}{23.75} = 3.55$$

Similarly calculation is done for EBL, NIBL and NSBL and tabulated as follows:

Regression Analysis between EPS and MPS

Bank	Intercept (a)	Slope (b)	SEE	S _b	T value	Remarks
BOK	-2748.09	84.25	365.90	23.75	3.550	Significant
EBL	1318.24	9.15	910.88	46.46	0.197	Insignificant
NIBL	-356.96	33.06	829.61	43.19	0.766	Insignificant
NSBL	-364.39	50.62	484.01	34.79	1.460	Insignificant

DPS on EPS for BOK,

Calculation of Regression Equation

EPS(X)	DPS(Y)	XY	X ²	Y ²	(X - \bar{X}) ²
43.50	20	870	1892.25	400	31.81
59.94	2.11	126.47	3592.80	4.45	116.64
54.68	7.37	402.99	2989.90	54.32	30.69
43.08	15	646.2	1855.89	225	36.72
44.51	16.75	745.54	1981.14	280.56	21.44
$\Sigma X =$ 245.71	$\Sigma Y =$ 61.23	$\Sigma XY =$ 2791.20	$\Sigma X^2 =$ 12311.98	$\Sigma Y^2 =$ 964.33	$\Sigma (X - \bar{X})^2 =$ 237.3

Let the regression equation of Y on X be

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

Where,

Y is dependent variable (DPS)

X is independent variable (EPS)

a is intercept of the line

b is Slope of the line

To find the values of a and b we have the following two normal equations.

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

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \dots \dots \dots (iii)$$

Substituting the values in equation (ii) and (iii) we get,

$$61.23=5a+245.71b.....(iv)$$

$$2791.20=245.71a+12311.98b.....(v)$$

Multiplying (iv) by 49.142 and subtracting from (v) we get,

$$2791.20=245.71a+12311.98b$$

$$3008.96=245.71a+12074.68b$$

$$-217.76=237.3b$$

$$\therefore b = \frac{-217.76}{237.3} = -0.9176$$

Putting the value of b in equation (iv) we get,

$$61.23=5a+245.71 \times (-0.9176)$$

$$61.23=5a-225.46$$

$$\therefore a = \frac{61.23 + 225.46}{5} = 57.34$$

$$\begin{aligned} \text{Standard Error of Estimate (SEE)} &= \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{N - 2}} \\ &= \sqrt{\frac{964.33 - 57.34 \times 61.23 - (-0.9176) \times 2791.20}{5 - 2}} = \sqrt{4.87} \\ &= 2.21 \end{aligned}$$

Standard Error of regression coefficient

$$(S_b) = \frac{SEE}{\sqrt{\sum(x - \bar{X})^2}} = \frac{2.21}{\sqrt{237.3}} = 0.143$$

$$|t|\text{value} = \frac{b}{S_b} = \frac{-0.9176}{0.143} = 6.42$$

Similarly calculation is done for EBL, NIBL and NSBL and tabulated as follows:

Regression Analysis between DPS and EPS

Bank	Intercept (a)	Slope (b)	SEE	S _b	T value
BOK	57.34	-0.9176	2.21	0.143	6.42
EBL	-12.15	0.4646	17.48	0.892	0.52
NIBL	51.30	-0.6711	8.24	0.429	1.56
NSBL	-4.76	0.3182	4.88	0.351	0.91

MPS on DPS for BOK,

Calculation of Regression Equation

DPS(X)	MPS(Y)	XY	X ²	Y ²	(X - \bar{X}) ²
20	1375	27500	400	1890625	60.06
2.11	2350	4958.5	4.45	5522500	102.82
7.37	1825	13450.25	54.32	3330625	23.81
15	840	12600	225	705600	7.56
16.75	570	9547.5	280.56	324900	20.25
$\Sigma X =$ 61.23	$\Sigma Y =$ 6960	$\Sigma XY =$ 68056.25	$\Sigma X^2 =$ 964.33	$\Sigma Y^2 =$ 11774250	$\Sigma (X - \bar{X})^2 =$ 214.5

Let the regression equation of Y on X be

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

Where,

Y is dependent variable (MPS)

X is independent variable (EPS)

a is intercept of the line

b is Slope of the line

To find the values of a and b we have the following two normal equations.

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

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \dots \dots \dots (iii)$$

Substituting the values in equation (ii) and (iii) we get,

$$6960=5a+61.23b\text{.....(iv)}$$

$$68056.25=61.23a+964.33b\text{.....(v)}$$

Multiplying (iv) by 12.246 and subtracting from (v) we get,

$$68056.25=61.23a+964.33b$$

$$85232.16=61.23a+749.82b$$

$$-17175.91=214.51b$$

$$\therefore b = \frac{-17175.91}{214.51} = -80.07$$

Putting the value of b in equation (iv) we get,

$$6960=5a+61.23 \times (-80.07)$$

$$6960=5a-4902.69$$

$$\therefore a = \frac{6960 + 4902.69}{5} = 2372.54$$

$$\begin{aligned} \text{Standard Error of Estimate (SEE)} &= \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{N - 2}} \\ &= \sqrt{\frac{11774250 - 2732.54 \times 6960 - (-80.07) \times 68056.25}{5 - 2}} \\ &= \sqrt{236878.51} = 486.70 \end{aligned}$$

Standard Error of regression coefficient

$$(S_b) = \frac{SEE}{\sqrt{\sum(x - \bar{X})^2}} = \frac{486.70}{\sqrt{214.5}} = 33.23$$

$$|t|\text{value} = \frac{b}{S_b} = \frac{-80.07}{33.23} = 2.41$$

Similarly calculation is done for EBL, NIBL and NSBL and tabulated as follows:

Regression Analysis between DPS and MPS

Bank	Intercept (a)	Slope (b)	SEE	S _b	T value
BOK	2372.55	-80.07	486.70	33.23	2.41
EBL	3400.40	-41.74	509.59	16.11	2.59
NIBL	2548.32	-72.18	424.48	22.07	3.27
NSBL	1383.20	-41.42	589.61	64.75	0.64

Appendix V

Calculation of Trend Analysis

MPS of BOK

Year (X)	x=X-A	MPS (Y)	x ²	xY
06/07	-2	1375	4	-2750
07/08	-1	2350	1	-2350
08/09	0	1825	0	0
09/10	1	840	1	840
10/11	2	570	4	1140
Total		∑Y=6960	∑x ² = 10	∑xY= -3120

Assume, A=2009

Now,

$$a = \frac{\sum Y}{N} = \frac{6960}{5} = 1392$$

$$b = \frac{\sum xY}{\sum x^2} = \frac{-3120}{10} = -312$$

Now for coming years,

For 11/12,

$$Y = a + bx$$

$$= 1392 + (-312) \times 3 = 456$$

For 12/13,

$$Y = a + bx$$

$$= 1392 + (-312) \times 4 = 144$$

Similarly, calculation is done for EBL, NIBL and NSBL and tabulated as:

Trend Analysis of MPS

Bank	Intercept (a)	Slope (b)	Forecasted MPS	
			11/12	12/13
BOK	1392	-312	456	144
EBL	2148.2	-487.6	685.4	197.8
NIBL	1357.4	-489.4	0	0
NSBL	1178.6	-232.7	480.5	247.8

EPS of BOK

Year (X)	x=X-A	EPS (Y)	x ²	xY
06/07	-2	43.50	4	-87
07/08	-1	59.94	1	-59.94
08/09	0	54.68	0	0
09/10	1	43.08	1	43.08
10/11	2	44.51	4	89.02
Total		$\sum Y = 245.71$	$\sum x^2 = 10$	$\sum xY = -14.84$

Assume,

$$A = 2009$$

Now,

$$a = \frac{\sum Y}{N} = \frac{245.71}{5} = 49.14$$

$$b = \frac{\sum xY}{\sum x^2} = \frac{-14.84}{10} = -1.484$$

Now for coming years,

For 11/12,

$$Y = a + bx$$

$$= 49.14 + (-1.484) \times 3$$

$$= 44.69$$

For 12/13,

$$Y = a + bx$$

$$= 49.14 + (-1.484) \times 4$$

$$= 43.20$$

Similarly, calculation is done for EBL, NIBL and NSBL and tabulated as:

Trend Analysis of EPS

Bank	Intercept (a)	Slope (b)	Forecasted EPS	
			11/12	12/13
BOK	49.14	-1.484	44.69	43.20
EBL	90.71	1.786	96.07	97.85
NIBL	51.85	-3.278	42.02	38.74
NSBL	30.48	-3.364	20.39	17.02

DPS of BOK

Year (X)	x=X-A	DPS (Y)	x ²	xY
06/07	-2	20	4	-40
07/08	-1	2.11	1	-2.11
08/09	0	7.37	0	0
09/10	1	15	1	15
10/11	2	16.75	4	33.5
Total		$\sum Y = 61.23$	$\sum x^2 = 10$	$\sum xY = 6.39$

Assume,

$$A = 2009$$

Now,

$$a = \frac{\sum Y}{N} = \frac{61.23}{5} = 12.25$$

$$b = \frac{\sum xY}{\sum x^2} = \frac{6.39}{10} = 0.639$$

Now for coming years,

For 11/12,

$$Y = a + bx$$

$$= 12.25 + (0.639) \times 3$$

$$= 14.17$$

For 12/13,

$$Y = a + bx$$

$$= 12.25 + (0.639) \times 4$$

$$= 14.81$$

Similarly, calculation is done for EBL, NIBL and NSBL and tabulate as:

Trend Analysis of DPS

Bank	Intercept (a)	Slope (b)	Forecasted DPS	
			11/12	12/13
BOK	12.25	0.639	14.17	14.81
EBL	30	10	60	70
NIBL	16.5	5.75	33.75	39.5
NSBL	4.94	-1.018	1.886	0.87

DPR of BOK

Year (X)	$x=X-A$	DPR (Y)	x^2	XY
06/07	-2	45.98	4	-91.96
07/08	-1	3.52	1	-3.52
08/09	0	13.48	0	0
09/10	1	34.82	1	34.82
10/11	2	37.63	4	75.26
Total		$\sum Y=135.43$	$\sum x^2 = 10$	$\sum XY= 14.6$

Assume,

A=2009

Now,

$$a = \frac{\sum Y}{N} = \frac{135.43}{5} = 27.09$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{14.6}{10} = 1.46$$

Now for coming years,

For 11/12,

$$Y = a + bx$$

$$= 27.09 + 1.46 \times 3$$

$$= 31.47$$

For 12/13,

$$Y = a + bx$$

$$= 27.09 + 1.46 \times 4$$

$$= 32.93$$

Similarly, calculation is done for EBL, NIBL and NSBL and tabulated as:

Trend analysis of DPR

Bank	Intercept (a)	Slope (b)	Forecasted DPR	
			11/12	12/13
BOK	27.09	1.46	31.47	32.93
EBL	32.92	11.288	66.78	78.07
NIBL	34.63	12.101	70.93	83.03
NSBL	15.81	-0.263	15.02	14.76