## CHAPTER – I

## INTRODUCTION

## 1.1 Background of the Study

Banks play a vital role in developing the economy of any country. Banks are foundation of the economy. Hence, banks are extremely necessary for the healthy and perennial progress of our country. Banks are very different from financial institutions, as they cannot create credit through their acceptance of deposit, but the bank do so. Banks collect the funds from different sources (people) and invest in many different sectors, which play the vital role in reducing poverty, creating employment opportunities, and raising people's life standard.

Banks facilitates the channel of fund from the surplus spending units (investors) to the business sector in the economy. In Nepal, the banking plays significant role in the economic development of the country. Bank is a resource for the economic development, which maintains the self-confidence of various segments of society and extends credit to the people.

Commercial banks are those financial institutions mainly dealing with activities of the trade, commerce, industry and agriculture that seek regular financial and other helps from them (banks) for growing and flourishing. The main objective of commercial banks is to mobilize idle resources in particular productive uses after collecting them from scattered sources. Thus, commercial banks as a financial institution, transfers monitory sources from savers to users. Commercial banks contribute significantly in the formulation and mobilization of internal capital and development efforts; they furnish necessary capital required for trade and commerce in mobilizing the dispersed saving of the individuals and institution. Commercial banks are being the means of enlistment of society. The function of commercial banks are in many ways

such as accepting deposits, provide interest in the formulation of capital, granting loan which helps to remove the deficiency of capital performing agency functions which make the life easier and they also play an important role in credit creation.

Generally, while the company operates in profit, it will be acceptable to pay the dividend regularly. The portion out of the earning made by the firm that shareholders obtain as return to their investment in shares is referred to as 'Dividend'. In other words, the shareholders earning instead of investment provide equity towards the company. Dividend is the one of the most important factor in financial decision because it directly affects the financial structures of the company. Wealth maximization is the major objective of the dividend policy.

Dividend policy determines the allocation of net profit between payment to shareholders and reinvestment in the firm. In other words, dividend policy can be defined as dividing the earning between dividend and retention. The earning which is kept as reserve by the company is known as retained earnings. Retained earnings are one of the most significant sources of funds required for the growth of the company. At the end of the fiscal year, management has to decide how much money should be kept as retention and how much should be distributed to the shareholders. This is the important aspect of the dividend policy.

Dividend policy is an integral part of the firm's financing decision. Dividend decision is however still a crucial as well as controversial area of managerial finances. The dividend policy of the firm is regarded as a tool to determine the appropriate allocation of profit between dividend payment and amount to be retained in the firm or plugging them back into business. Dividend is a portion of earning of a firm which is distributed to its shareholders. In a capital structure decision each and every firm can obtain additional funds by issuing new equity and retention of earning. So after measuring the firm's profit there

is further problem of how much of this profit should be distributed in terms of dividend. It is a big financial decision because the firm has to choose between distributions of the profit to the shareholders of reinvesting them to finance the business. Different firms adopt different approaches to distribute dividend. To maximize the shareholder wealth, there should be used large amount of profit for payment of dividend. If the firm's objective is to expansion of business, the firm retains profit to refinance in investment program for the growth of the business.

Dividend policy decision seems to be independent from financing decision. However, in reality, they are not. The dividend decision is essential part of the financing policy of the firm. The decision on selecting dividend payout procedure may affect the credit worthiness of the firm and hence the cost of debt and cost of equity. If the cost of capital changes, the value of the firm will also changes. Unfortunately, one cannot determine whether the change in value will be positive or negative without knowing more about the optimality of the firm's dividend policy.

There is no any uniformity in the dividend distribution practiced in Nepal among the different corporations. The government is unable to received dividends from the public enterprises as documented in past several year's budget speeches and economic surveys published by Nepal government, Ministry of Finance. Recently joint venture banks and some other public limited companies have shown new trend of paying dividend to shareholders there is also growing practice of paying bonus shares among some corporation of Nepal. Stock split is another aspect of dividend policy which is popular in the developed capital market but this aspect is almost neglected in the capital market of Nepal. An alternative form of dividend is share repurchase. If a firm has excess cash and insufficient profitable investment opportunities to justify the use of these funds, it is in the shareholder's interests to distribute the funds. The distributions can be accomplished either by the repurchase of share or by paying the funds out in increased dividends. It is thus share repurchase is often

viewed as an alternative to paying dividends. However, Nepal Company Act, 2063, section 47 has prohibited company from purchasing its own shares.

Some companies may pay whole earnings as dividend at the beginning to create good image in financial sector but later they may change their policy and announce a certain percentage of dividend payout term. The decision to keep some portion of earnings and to pay some portion of earnings as dividend is known as dividend policy. The dividend payout ratio may be different but the common dividend payout ratio in 40% different studies reveal. It seems that the actual owners of the corporation are not treated rightly by not giving sufficient dividend. Although the actual owners of the company are shareholders, they are paid low dividends in some companies whereas in some companies the dividend is not announced. But recently the trend of payment of dividend is increasing.

According to law, dividend should be declared out of the net profit. Usually dividend is paid annually, semi annually, quarterly, or monthly. In Nepal, dividend is paid annually. Some company may pay whole earnings as dividend to create good image in the market at the beginning but later they may change their policy and announce certain percentage of dividend payout term but usually dividend payout ratio seems to be 40%, in Nepal.

# 1.2 Focus of the Study

The study is focused at assessing the prevailing dividend policy and practices of Nepalese commercial banks. For that the study will concentrate on view of dividend policy of selected commercial banks i.e. EBL & BOK and the assessment to the impact of dividend decision on the earning per share, price earnings ratio, dividend payout ratio and market price of stock.

## 1.3 Statement of the Problem

Dividend policy is an integral part of financial management of a business firm. It is relevant in all institutions that mobilize funds in terms of return and investment. It has been accepted as a distinct discipline in the earlier stage of 21st century. Dividend refers to that portion of a firm's net earning which are paid out to the shareholders. Whether dividends have an influential on the value of the firm is the most critical question in dividend policy. If dividends are irrelevant, the firm should retain earnings only in keeping with its investment opportunities. If there are not sufficient investment opportunities providing expected returns in excess of the required return, the unused funds should be paid out as dividends. However, Nepalese commercial bank has not been able to provide satisfactory result on dividend decision. Government policy is also partly responsible on the dividend decision. Commercial banks in Nepal have no consistency policy on dividend decision and dividend distribution does not match with the earning as well as there is no proper relationship between dividend and quoted market price of share. Procedure of dividend is also not well managed and declared in commercial bank. Top management declares the dividend haphazardly without following proper guideline. These commercial banks have no clear outline of the payment procedure in the dividend policy so that market does not know how these banks declare dividend and how they pay.

In Nepal, there are only a few companies that regularly pay dividend to shareholders. Commercial banks, especially joint venture banks, have sufficient earnings and able to pay dividends. But they are not following the appropriate dividend policies. While earning is low they pay high dividend and something when earning is high they pay low dividend. We cannot see the uniformity of dividend pay-out ratio in the sample banks. Now, we know that all banks have sufficient earnings but they are not distributing the dividend in equal proportion. They have not followed the consistency in dividend distribution

policy and we could not get uniformity of dividend pay-out ratio in these sample banks.

The followings are the research questions that have been examined for the purpose of this study.

- What is the impact dividend on market price per share?
- Should the sample banks have uniformity in dividend distribution?
- Is there any consistency between dividend per share and dividend payout ratio in the sample banks?
- Does the Dividend Policy affect DPS, EPS, DPR, PE Ratio and MVPS in stated commercial banks?

## 1.4 Objectives of the Study

The basic objective of the study is to make comparative analysis of dividend policy of selected banks. But the specific objective are as follows.

- To see the dividend patterns and policies of sample commercial banks.
- To see if there is any uniformity among DPS, EPS and DPR on the two sample commercial banks.
- To explore the relationship of financial indicators such as DPS, EPS,
   DPR, EPS and Market Value Per Share(MVPS) Per Share.

# 1.5 Significance of the Study

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 impact on the firm's stock price and company's whole profitability. This research report will help to make a decision about whether to change the dividend policy. Nepalese financial institutes have already experienced the practice of dividend distribution. As such, it is felt significant to study the policy regarding dividend concerned with financial institution.

Dividend policy decision is one of the most important decisions in every organization. This study is expected to fill the research gap and add to the inputs to financial literature relating to the dividend policy. The findings may be valuable to following groups.

- To the Management: Dividend Policy may affect value of the firm; moreover, most common objective of the firm is to maximize shareholder wealth. Therefore, management may adopt appropriate dividend policy.
- To the Shareholders: Shareholders are more concerned with the amount of dividend paid by the firm. Therefore, they have more curiosity on the dividend policy adopted by the concerned banks. With this study, they can make their mind more comparable in terms of dividend pattern and value of the firm.
- To the Perspective Investors: Generally, most of the investors prefer to invest in preferable firm and expect high return. Corporate sector is expanding but there is information gap between the management of Nepalese companies and investors, who are eager to invest in shares. They are just investing in the shares in trial and error methods. So, the dividend behavior should be effective to attract new investors keeping the previous investors satisfied and should maintain the reputation of the firm.
- To the Researcher: The outcome of this study is expected to be an important for the researcher who are working in this area or will be interested to work in the same area.

Besides these, it will also be beneficial for the policy makers from the comparative study of dividend policy formulation. Dividend policy of the banks helps the customers, financial agencies, stockbrokers, interest person and scholars to find out appropriate dividend policy. It is believed that other banks will also be benefited from this study for policy implementation point of view.

64

1.6 Limitations of the Study

This study tries to evaluate the dividend practices of commercial banks of

Nepal. This research explain and analysis the subject matter with the help of

well known or already established analytical methods and technique therefore

as conclusion oriented research it doesn't much concern with fundamental and

decision oriented research. The major limitations of the study are as follows.

• Only secondary data are analyzed to interpret the results emerging from

decision, so the result depends on the reliability and accuracy of

secondary data.

• This study covers the study period from the fiscal year 2065/066 to

2069/070.

• Out of 31 commercial banks, only two private sector commercial banks

listed in Nepal stock Exchange are taken as Sample.

• The main focus is given to the quantitative aspects, qualitative factors

are not carried out.

• There are many factors those affect decision and valuation of the firm.

However, only those factors related to dividend have been considered in

this study.

Data related to cash dividend and stock dividend are analyzed and

interpreted.

1.7 Organization of the Study

The study has been organized into five chapters, the titles of each of these

chapters are as follows.

**Chapter –I: Introduction** 

This chapter contains the introductory part of the study. As already mentioned, this chapter describes the major issues to be investigated along with the general background, brief profiles of the sample banks, statement of problem, objectives, significance of the study and finally limitation of the study.

## **Chapter –II: Review of Literature**

This chapter is devoted to theoretical analysis and brief review of related and pertinent literature available. It includes a discussion on the conceptual framework and review of the major studies in general.

## **Chapter – III: Research Methodology**

This chapter describes the research methodology employed in the study. This chapter deals with the research design, source of data, methods of analysis, analysis of financial indicators and variables, test of hypothesis, definition of statistical tools etc.

## **Chapter- IV: Presentation and Analysis of Data**

This Chapter deals with the presentation and analysis of data to analyze quantitative factors on dividend policy using statistical tools and techniques. This chapter also includes the major findings.

## **Chapter- V: Summary, Conclusion and Recommendation**

This Chapter states summary, conclusion and recommendations, compares them with other empirical evidence to the extent possible and provides some suggestions.

Similarly, at the front part of the study table of contents, recommendation sheet, viva voice sheet, acknowledgement, list of table and figure and abbreviation are presented and bibliography and appendices are presented at the end of the study.

# CHAPTER - II REVIEW OF LITERATURE

This chapter reviews the literature related with the research topic, with more focus on the Dividend Practices of Nepalese Commercial Banks. In this regard, an insight would be put on the theories, then on the researches conducted outside and inside the country. Furthermore, the theoretical undeplinning of the concepts used during the analysis and the theories behind the share pricing would also be explained. While preparing this thesis, the researcher reviewed various magazines, journals, books, reports, etc and collected materials from different sources. The review of literature has been divided into categories namely conceptual framework, theories related to the topic and review of articles, books and master's level thesis. This chapter is divided into mainly two parts.

- 1. Conceptual review
- 2. Review of related studies
- 3. Review of Previous Research Work

## 2.1 Conceptual Review

Investors buy shares of firms with the hope of sharing profits earned by firms. Since the motive of shareholder is to receive returns on their investment. Nothing please them more than knowing the firm earning more and more profits, more dividends coming in and the stock price increasing. If profits are distributed, benefits are directs and are at present. If they are invested, the benefits are indirect and come in some future period in the form of expected stock price increase that results in capital gain when they sell shares.

There is a reciprocal relation between retained earnings and cash dividend. When the amount of retain earning is high, the company declares less dividend and when dividend paid is a big amount than retain earning reduced, which reduce the opportunity to reinvest and expand the organization. "Since dividend would be more attractive to shareholder, one might think that there would be a tendency for corporations to increase distribution of dividend. But

one might equally pressure that gross dividends would be reduced somewhat, with an increase in net after tax dividends still available to stockholders, and increase in retained earnings for the corporation" (*Throp, 1977: 34.*) Therefore, dividend decision is one of the major decisions of managerial finance. This decision consist the crucial decision of choosing between distributions of profit to shareholder or plugging them back into the business. Dividend decision has great influence on financial structure, flows of funds, corporate liquidity and so on.

The relationship between dividend and the value of the share is not clear-cut. The financial manager must understand the various conflicting factors, which influence the dividend policy before deciding the allocation of its company's earnings into dividends, and retain earnings. "There are, however, conflicting opinions regarding the impact of dividends on the valuation of the firm. According to one school of thought, dividends are irrelevant so that the amount of dividends paid has no effect on the valuation of a firm. On the other hand, certain theories consider the dividend decision as relevant to the value of the firm measured in terms of the market price of the shares" (*Khan & Jain, 1992: 84*). Thus dividend are irrelevant, is based on the assumption that the investors are indifferent between dividends and capital gains. So long as the firm is able to earn more than the equity capitalization rate, the investors would be content with the firm retaining the earnings. In contrast, if the return is less than the equity capitalization rate, investors would prefer to receive the dividend.

## 2.1.1 Concept of Security Market

Security market is the place where people buy and sell financial instruments. These financial instruments may be in the form of governments bonds, corporate bonds or debentures, ordinary shares, preference shares, etc. So far security market is concern; it is an important constituent of capital market. It has a wide term embracing the buyers and sellers and all the agencies and institutions that assist the sale and resale of corporate securities. Although

security market is concern in few locations, they refer more to mechanism rather than to place designed to facilitate the exchange of securities. Securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently to maintain higher degree of liquidity in securities, the security market should be efficient enough in price shares solely by economic considerations based on publicly available information (*Van Horne*, 2000: 95).

"An efficient market is one where current price of shares gives the best estimate of its true worth. Thus, security market is a place where shares of listed companies are traded or transferred from one to another a fare price through the organized brokerage system. The major function of security market is a competitive price thereby, importing future market ability and liquidity. It is a medium through which scattered savings and scarce resources are transferred to productive areas that ultimately help in the economic development and industrializations of the nation" (*Van Horne*, 2000: 99).

The stock exchange market or stock market is one of the forms of secondary market. It is a major component of secondary market and a medium through which corporate sector mobilize funds to finance the productivity projects by issuing share in the market. It is a place shares of listed companies are transferred from one hand to another at a fair price through the organized brokerage firms. The stock exchange is a financial market, which probably has a great glamour and is perhaps the least understood more over security market exists in order to bring together buyer and seller of the securities to facilitate the exchange of asset. Hence, it creates and enhances liquidity in the securities. Hence in tradition of listing the stock of public companies in the stock exchange for which they must meet exchange requirement to such factors as size of company number of years in business earning records, numbers of shares outstanding and the market value. The listed companies receive certain amount of free advertisement publicity and the status being listed enhances

their reputation. The stock exchange market provides at least economic functions, which are as follows.

- Security exchange facilitates the investment process by providing a
  market place to conduct efficient and relatively less expensive
  transaction. The investors thus assure that they would have place to see
  securities.
- Securities prices are more stable because of the operation of the securities market. They improve liquidity by providing continuous market that makes a more frequent by smaller price change.
- The investor is capable of handling continuous testing the value of securities. The records of securities transaction help investor to make a judgment about value and prospects of companies. Those prospects are judged favorably the investors, which leads to higher value and facilitate new financing and growth (*Van Horne*, 2000: 103).

In the capital market, all firms operate in order to generate earnings. Stockholders supply equity capital hoping to share in these earnings either directly or indirectly. If, for example, a firm plays out a portion of its earning to the shareholders in the form of dividend, the shareholder directly share the earning. If, instead of paying dividend, the firm retains the earning to exploit other growth opportunities, the shareholders can expect to be benefited indirectly through future increase in price of stock. Thus, shareholder wealth can be increased through either dividend or capital *gains* (*Van Horne*, 2000: 103).

## 2.1.2 Concept of Dividend

Dividends are payments made by a <u>corporation</u> to its shareholder members. It is the portion of corporate profits paid out to stockholders. "When a corporation earns a <u>profit</u> or surplus, that money can be put to two uses: it can either be re-invested in the business (called <u>retained earnings</u>), or it can be

distributed to shareholders. There are two ways to distribute cash to shareholders: share repurchases or dividends. Many corporations retain a portion of their earnings and pay the remainder as a dividend" (*Pandey, 1999:* 81).

"A dividend is allocated as a fixed amount per share. Therefore, a shareholder receives a dividend in proportion to their shareholding. For the joint stock company, paying dividends is not an expense; rather, it is the division of after tax profits among shareholders. Retained earnings (profits that have not been distributed as dividends) are shown in the shareholder equity section in the company's balance sheet - the same as its issued share capital. Public companies usually pay dividends on a fixed schedule, but may declare a dividend at any time, sometimes called a special dividend to distinguish it from the fixed schedule dividends. Cooperatives, on the other hand, allocate dividends according to members' activity, so their dividends are often considered to be a pre-tax expense" (Weston & Copeland, 1992: 135).

Dividends are usually paid in the form of cash, store credits (common among retail consumers' cooperatives) and shares in the company (either newly created shares or existing shares bought in the market.) Further, many public companies offer dividend reinvestment plans, which automatically use the cash dividend to purchase additional shares for the shareholder (http://en.wikipedia.org/wiki/dividend).

The term Dividend is defined as a return from investment in equity shares. The profit made but the firm which is distributed to the shareholders termed as dividend. Every firm after making profit either retain the money for further investment or distribute it among the shareholders. The firm should decide whether to keep the money as retained earnings or pay the dividend. It may be in cash, share and combination of both. The dividend policy is the policy followed by the firm regarding the dividend versus retention decision. Dividend policy of different organization may same or different, but the policy

followed by the firm should be suitable for both the shareholders as well as the firm itself (http://en.wikipedia.org/wiki/dividend).

Infact, dividend is the portion of the net earnings, which is distributed to the shareholders by a company. After successfully completing the business activities of a company, if the financial statement shows the net profit, the board of directors decides to declare dividend to the shareholders. Therefore, the payment of corporate dividend is at the discretion of BOD. The policy of a company in the division of its profit between to shareholders as dividend retention for its investment is known as dividend policy. Dividend policy determines the decision of earning between payment to shareholders and re-investment in the firm. one of the most. Dividend policy refers to the issue of how much of the total profit a firm should pay to its stockholders and how much to retain for investment so that the combine present and future benefits maximize the wealth of stock holders. There is a reciprocal relationship between retained earnings and cash dividends. If retained earnings are kept more by the company less will be dividend and vice versa. Dividend decision is one of the major decisions of managerial finance. It is in the sense that the firm has to choose between distributing profits to shareholder and return back in to the business. The decision depends up on the objective of the management for wealth maximization and profit maximization. The firm will use the net profit for paying dividends to the shareholders if the payment will lead to maximization of the wealth of the owners it not, it is better to retain them to finance investment programs. The relationship between dividend and value of the firm should therefore, be the criterion for decision making (http://en.wikipedia.org/wiki/dividend).

Most shareholders accept two forms of return from the purchase of common stock. These are capital gains and dividends. Capital gain may be defined as the market value of the common stock over time. The shareholders expect, at some point, a distribution of the firm's earning in the form of a dividend. Form mature and stable corporations, most investors expect regular dividends to be

declared and paid on the common stock. This expectation takes priority over the desire to retain earnings to finance expansion and growth. So, shareholders expectation can be fulfilled through either capital gains or dividends. "Financial management is therefore concerned with the activities of corporation that affect the well being of stockholders that well being can be partially measured by dividends received but a more accurate measure is the market value of stock." "Since dividends would be more attractive to stockholder, one might think that there would be tendency for corporations to increase distribution of dividends. But one might equally pressure that gross dividend would be reduced somewhat, with an increase in net after tax dividends still available to stockholders and increase in retained earnings for the corporation (http://en.wikipedia.org/wiki/dividend).

Basically in the planned economy, commercial bank not only provides economic resource but also provides and assists with technical know-how. They in other hands also do not discriminate the investment areas and organization whether the organization is public, joint venture, private sector or government. All these sectors are equally subsumed into the production plans which bank finance.

Not only in the highly developed industrial an non-industrial economics of the world where in a way the commercial and industrial activities are paralyzed in the absence of banks keeping their doors open , even in the developing countries most economic activities, particularly in the economy,s organized sector, are bank based.

## 2.1.3 Types or Major Forms of Dividends

Cash dividend is the most popular form of dividend. Bank and corporation need to follow various types of dividend in view of the objective and policies which they implement. The type of dividend that bank and corporation follow is partly a matter of attitude of directors and partly a matter of a various

circumstances and financial constraints that bound corporation dividend is being distributed in several forms, e.g. cash dividend, stock dividend, script dividend, property dividend and bond dividend.

Dividend is the periodic payment made to stockholders to compensate them for their wealth and investment funds. Dividends are pro-rata distributions to shareholders retained earnings. They can be in the form of cash, stock or property. Generally, corporation can only declare dividends out of earnings, although some states laws and corporate agreements permit to declaration of dividends from sources other than earnings. (*Hasting*; 1996: 150).

#### 2.1.3.1 Cash Dividend

The portion of net earnings, which are distributed to the shareholder as cash in proportion to their shares of the company is called cash dividend. If the company does not have sufficient cash at the time of dividend payment, company seeks to arrange funds, which will be managed by borrowing. Cash dividend is major form of dividend, which is distributed to shareholders in cash out of the company's profit. Generally, stockholders have strong performance for cash dividend.

When cash dividend is paid then the total assets of the company is automatically reduced. So, the company needs to have enough cash and sufficient balance for the payment of cash dividend. If it does not have enough balance, arrangement should be made to borrow funds, which is difficult for the company. When the company follows stable dividend policy, they use to prepare cash budget to indicate the necessary funds which would be needed to meet regular dividend payment of the company.

Most Companies pay dividend in cash. Cash dividend is that which is distributed to the shareholders in cash out of the earnings of the company. "Both total assets and net worth of company are reduced when cash dividend is

distributed. The market price of share drops in most cases by amount of cash dividend distributed" (*Gupta*; 2009: 403-405).

#### 2.1.3.2 Stock Dividend

A stock dividend is the payment of existing owners of a dividend in is the firm of stock although stock dividends don't have a real value, firms pay stock dividend as a replacement for a supplement to cash dividend. If the declare dividend is provide in the form of share instead of paying in cash, the dividend is said to be stock dividend. From the providence of stock dividend and the dividend the current market price of shares decrease but it doesn't have any impact in the wealth of shareholders. "A stock dividend simply is the payment of additional stock to stockholders nothing more than a recapitalization of the company a stockholders proportional ownership remains unchanged." Stock Dividend: A payment of additional shares of stock to share holders often used in place of or in additional to cash dividend. Stock dividend is known as bonus shares too (Van Horne; 2000: 328).

"An issue of bonus share represents a distribution of shares in addition to the cash dividend (known as stock dividend in U.S.A.) the existing shareholders" (*Pandey; 1995: 205*). The effects of the issue of the stock dividends are summarized below.

- Increase in number of outstanding shares
- Transfers retained earning balance to capital
- Does any changes in net worth and par value of the company
- Does not affect the shareholders proportional ownership and
- Theoretically it is not a thing of value to shareholders

Stock split is the increment of the number of shares outstanding through a proportional reduction in the par value of the stock. When stock splits occur, shareholders receive large number of shares for the old shares they have. The effects of stock split are given below;

- It increases the number of outstanding shares
- Reduces the par value and price of the shares
- Does not change the proportional ownership of the stock holders
- It neither changes the capital account nor the net worth and
- Theoretically, it is not a thing of value to stockholders

Stock dividend and stock split do not change the assets of the firm. In both cases, proportional increases in shares, no changes in net worth, not a thing of value to stockholders are the same features.

## Difference between stock dividend and stock split

- Use of retain earning
- Change in capital account, but if company declares more than twenty
  percent of stock dividend then there is no differences between stock
  dividend and stock splits because only paid up value of stock dividend is
  transferred from retain earning to capital account

## 2.1.3.3 Property Dividend

"If the declare dividend is provide in the form of property (assets) instead of cash, the dividend is said to be property dividend. This form of dividend may be followed when there are assets that are no longer necessary in operation of the business or in extra ordinary circumstance. Company's own products and securities of subsidiaries are the examples that have been paid as property dividend" (*Shah*; 2009:403).

#### 2.1.3.4 Scrip Dividend

When company has been suffering from the cash problem but has earned profit, scrip dividend is paid (issued). Scrip is a form of promissory note promising to pay then holder at specified later date. Under this type of dividend company issues and distributes to shareholders transferable promissory notes which may

be interest bearing or not. Scrip dividend means payment of dividend in scrip or promissory notes. Because of temporary cash shortage, sometimes the firm needs cash generated by business earnings to meet the different requirements. For those requisites, scrip dividend is issued promising the payment will be made in future.

This type of dividend does not change the total numbers of the stock but issued promissory note in the proportion of share held by the stockholders. Scrip dividend has relatively low psychological value in the stockholder's perception than other forms of the dividends (*Modigliani & miller*, 1961: 181).

#### 2.1.3.5 Bond Dividend

Bond dividend by its name is a dividend that is distributed to shareholders in forms of a bond. In other words, company declares dividend in forms of as own bond with a view to avoid cash outflows. Bond dividend helps to postpone the payment of cash. Though there are different forms of dividends, in general, the form of dividend popular in Nepal are cash and stock dividend. The form of dividend chosen for this study is cash dividend. Bonds used to pay carry interest and it means that the company assumes the fixed obligation of interest payment annually and principal amount of bond at maturity date. Bond dividend posses the following characteristics:

- Bond dividends are the means to dividend postponement for a while but more it is obligation.
- It couldn't bring back the psychological value as the cash dividend,
- Bond and scrip dividend are same, only the difference between these are maturity time i.e. scrip has relatively less maturity time than bond dividend (*Pandey*; 1995: 105).

#### 2.1.4 Dividend Policies or Theories of Dividends

Dividend policy is concerned with taking a decision regarding paying <u>cash</u> <u>dividend</u> in the present or paying an increased dividend at a later stage. The firm could also pay in the form of <u>stock dividends</u>, which unlike cash dividends do not provide liquidity to the investors; however, it ensures capital gains to the stockholders. The expectations of dividends by <u>shareholders</u> helps them determine the share value, therefore, dividend policy is a significant decision taken by the financial managers of any company.

## 2.1.4.1 Residual Theory of Dividend

Residual dividend policy assumes that external sources of finance are not available or even if it is available, the same cannot be used due to its excessive cost. Under the residual theory of dividend, company make their investment decision then payout any remaining funds as cash dividend, residual theory of dividend suggest that only residual earnings should be distributed as dividend, which is left accepting all the profitable investment opportunities, when depends upon the investment policy of the firm. According to this theory, if there exists a balance of earning after paying fixed obligation and investment opportunities and if the firm has investment opportunities with higher return than required, then the firm will invest the earnings to the project, and if there are only earning left accepting on the investment opportunities then it will be distributed to stockholders as cash dividend.

When the firm has opportunity of investment in profitable sector at first, they prefer the internally generated funds (retained earnings) rather than the externally generated funds, which is comparatively expensive due to the flotation cost and others. So the amount of dividend fluctuates time to time in keeping with availability of acceptable dividend opportunities of the firm. "Although, the residual theory of dividend appears to make further analysis the dividend policy unnecessary, it is not clear that dividends are solely a means of disbursing excess funds"

If the earning is more than financing needed by equity then the funds more than needed is distributed as dividend, if equity is less than financing needed by equity or equal to it, then distribute no dividend. Therefore, this theory assumes dividend policy is very passive in nature. The amount of dividend is calculated as follows;

$$D_t = \text{Max.} (E_t - I_t \text{ or } 0)$$

Where,

 $D_t = \text{dividend paid in year t}$ 

 $E_t$  = earning in year t

 $I_t$  = portion of investment in year t to be financed by equity

In calculation, we can say the residual theory of dividend prefers use of internal funds in investment and increased value of shareholders assets through capital gain of equity.

## 2.1.4.2 Constant Dividend per Share

Constant dividend policy is based on the payment of a fixed rupees dividend in each year (period). A number of companies follow the policy of paying a fixed amount per share as dividend every year, irrespective of fluctuations in earnings. This policy imply when the dividend per share will be increased. When company reaches new levels of earnings and expects to maintain it, the annual dividend per share may be increased. It is easy to follow this policy when earnings are stable. If earnings pattern of a company shows wide fluctuations, it is difficult to maintain such policy. "The dividend policy of paying a constant amount of dividend per year treats common shareholders somewhat like preference shareholders without giving any consideration to investment opportunities within the firm and the opportunities are available to shareholders." This policy is generally preferred by those persons and institutions that depend up on the dividend income to meet their living and

operating expenses. This policy is believed to be the one that affects stock piece favorably (*Sapkota*; 2007: 306).

## 2.1.4.3 Constant Pay-out Ratio

The ratio of divided to earnings is known as pay-out ratio. The policy to distribute a certain percentage of profit in every period is called constant pay-out ratio. With this policy the amount of dividend will fluctuate indirect proportion to earnings. It is related to the company's ability to pay dividends. If company incurs losses no dividend shall be paid regardless of shareholders.

## 2.1.4.4 Low Regular Plus Extra Dividend

The low regular plus extra dividend policy extra dividend policy is compromise between the first two. Under this policy, a firm usually pays a constant dividend to shareholders and when small, additional or extra dividend is paid over and above the regular dividend. "This type of dividend policy enables a company to pay constant amount of dividend regularly without a default and allows a great of flexibility for supplementing the income of shareholders only when company's earnings are higher than the usual, without committing itself to make larger payments as a part of the future dividend." Generally this type of policy is mostly followed by those companies whose stockholder prefers at least a certain amount of regular dividends.

#### 2.1.5 Dividend Dates

Any dividend that is declared must be approved by a company's <u>Board of Directors</u> before it is paid. For <u>public companies</u>, there are four important dates to remember regarding dividends. These are discussed in detail with examples at the Securities and Exchange Commission site.

#### 1. Declaration date

Declaration date is the day the Board of Directors announces its intention to pay a dividend. On this day, a <u>liability</u> is created and the company records that liability on its books; it now owes the money to the stockholders. On the declaration date, the Board will also announce a date of record and a payment date.

#### 2. In-dividend date

In-dividend date is the last day, which is one trading day before the ex-dividend date, where the stock is said to be cum dividend ('with [including] dividend'). In other words, existing holders of the stock and anyone who buys it on this day will receive the dividend, whereas any holders selling the stock lose their right to the dividend. After this date the stock becomes ex dividend.

#### 3. Ex-dividend date

Ex-dividend date (typically two trading days before the record date for U.S. securities) is the day on which all shares bought and sold no longer come attached with the right to be paid the most recently declared dividend. This is an important date for any company that has many stockholders, including those that trade on exchanges, as it makes reconciliation of who is to be paid the dividend easier. Existing holders of the stock will receive the dividend even if they now sell the stock, whereas not anyone who now buys the stock will receive the dividend. It is relatively common for a stock's price to decrease on the ex-dividend date by an amount roughly equal to the dividend paid. This reflects the decrease in the company's assets resulting from the declaration of the dividend. The company does not take any explicit action to adjust its stock price; in an efficient market, buyers and sellers will automatically price this in.

## 4. **Book closure Date**

Whenever a company announces a dividend payout; it also announces a date on which the company will ideally temporarily close its books for fresh transfers of stock.

#### 5. Record date

Shareholders registered in the <u>stockholders of record</u> on or before the date of record will receive the dividend. Shareholders who are not registered as of this date will not receive the dividend. Registration in most countries is essentially automatic for shares purchased before the ex-dividend date.

#### 6. Payment date

Payment date is the day when the dividend checks will actually be mailed to the shareholders of a company or credited to brokerage accounts.

## 2.1.6 Factors Influencing Dividend Policy

Firm's dividend decision is affecting by various factors. Therefore while making a dividend decision; many factors are to be considered. In this subsection, an attempt has been made to discuss the factors, which generally influence the dividend policy of the firm. Some of these factors are trying to mention below.

#### a. Legal Restriction

All the companies are bounded by certain legal restriction for dividend payment. These constraints are:

- Company can pay dividend from the earning of current year or past year.
- Company cannot pay dividend by the liabilities of the company exceed assets.

- Dividend cannot be paid if the amount of dividend to be distributed exceeds net profit.
- Dividend cannot be paid from the capital invested in the firm.

## **b.** Liquidity Position

Liquidity position (availability of cash) of the firm is an important consideration for dividend payment. Although a firm can have adequate earning to declare dividend but it may not have sufficient cash to pay. The dividend payment means cash outflow. Generally, growing firm faces the problem of liquidity even though it makes good profit but it needs funds for its expansion, so they cannot declare dividend.

## c. Investment Opportunities

The dividend policy is also influenced by the financial needs of the company. If any profitable project found, company invests its earning to that project rather than paying dividend. "A growing firm gives precedence to the retention of earnings over the payment of dividend in order to finance its expanding objectives. But the firm having stable earnings trends will prefer to pay larger portion of its earnings as dividend." When the investment opportunities arise in frequently, company follows a policy of paying dividend and raises external funds, when the investment opportunities occur.

#### d. Access to Capital Market

Although a company has insufficient cash, it will able to pay dividend if it raise fund in capital market. They can generate fund from the capital provides flexibility to the management in paying dividend as well in meeting corporate obligation. Thus, greater the ability of the fund to raise funds in the capital market, the greater will be its ability to pay dividends even it is not liquid.

#### e. Control

If the company pay access cash dividend, there will be the shortage of fund to finance investment opportunities, which affects the control position of existing stockholders. So they are not desirable to distribute the earning as dividend, which prevents them to lose the control position to the company.

#### f. Inflation

During the period of inflation, the company should retain high percentage of earnings because of inadequate funds generation from depreciation to replace absolute equipment.

## g. Earning Stability

A company with stable earning pays more dividends in prospects of continuity of the earnings in the future. But a company having fluctuating earnings pays fewer dividends to face its future financial difficulties.

## h. Growth Prospects

A rapidly growing firm usually has a substantial need funds to finance the abundance of attractive investment opportunities. Instead of paying large dividends and then attempting to sell new shares to raise the equity investment capital it needs. This type of firm usually retains larger portions of its earnings and avoids the expense and inconvenience of public stock offering.

#### i. Stockholders Preference

In a closely held corporation with relatively few stockholders, management may be able to set dividend 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 earnings retention, resulting in eventual price appreciation, over a high payout policy.

#### j. Restrictive Covenants

Restrictive covenants contained in bond indenture, term loans, short-term borrowing agreements, lease contracts and preferred stock agreements affect the dividend decision. These restrictions limit the total amount of dividends a firm can pay (*Walter*, 1996: 144).

## 2.2 Review of Related Studies

Modigliani & Miller (1961), in their article "Dividend Policy, Growth & Valuation of Shares" presented a new model of valuation and argued that dividend policy has no effect on the firm's share price. They developed the drastically new idea that dividend policy of a firm is irrelevant, as it does not affect the wealth of shareholders. This article is the most comprehensive argument for the irrelevant of dividend. In the history of finance, firstly, they declared that dividend policy does not affect the value of the firm, i.e., dividend policy has no effect on the share prices of the firm. They argued that the value of the firm depends on the firm's earnings which depend on its investment policy. Therefore, as per MM theory. A firm's value is independent of dividend policy. MM's Hypothesis of irrelevance is based on following critical assumptions.

- There are no taxes.
- Risk and uncertainty doesn't exist.
- The firm operates in perfect Capital market.
- The firm has a fixed investment policy which is not subject to change.

They provided the proof on support of their argument in the following manner.

**Step 1:** The market price of a share in the beginning of the period is equal to the present value of dividend paid at the end of the period plus the market price of the share at the end of the period.

Symbolically,

$$P_0 = \frac{D_{1+P_1}}{1+K_e}$$

Where

 $P_0$  = Market price at the beginning or at the zero period.

 $K_e$  = Cost of equity capital (assume constant).

 $D_1$  = Dividend per share.

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

**Step 2:** Assuming that the firm doesn't resort to any external financing the market value of the firm can be computed as follows.

$$nP_0 = n(D_1 + P_1)$$

$$nP_0 = \frac{n(D_1 + P_1)}{1 + K_e}$$

Where,

n = Number of equity shares at zero period.

**Step 3:** If the firm's internal sources of financing its investment opportunities fall short of the funds required, and Dn is the number of new shares issued at the end of year 1 at price P1, then,

$$n\,P_0\ = \frac{n\,D_1 +\,P_1(n+\,D_n\,) - D_n\,P_1}{1+\,K_e}$$

Where,

n = No. of shares at the beginning

Dn = No. of equity shares issued at the end of the period.

**Step 4:** If the firm were to finance all investment proposals, the total amount of new shares issued would be given by the following equation,

$$DnP_1 = I - (E - nD_1)$$

Or, 
$$DnP_1 = I - E + nD_1$$

Where,

 $DnP_1$  = the amount obtained from the sale of new shares to finance capital budget.

I = The total amount requirement of capital budget,

E= Earning of the firm during the period.

 $(E - nD_1) = Retained earnings.$ 

**Step 5:** By substituting the value of DnP<sub>1</sub> from equation of step 4 to equation of

$$nP_0 = \frac{n D_1 + P_1(n + D_n) - 1 + E - nD_1}{1 + K_e}$$

$$nP_0 = \frac{P_1(n+D_n) - I + E}{1 + K_e}$$

**Conclusion:** Modigliani and Miller concluded that dividend policy has no effect on the share price. So, there is no role of dividend in above equation.

In this way, according to Modigliani and Miller's study "It seems that under condition of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of the share". However, the view that dividend is irrelevant is not justified, once the assumption is modified is consider the realities of the world. In practice, every firm follows one kind

of dividend policy or another. The selection of a certain dividend policy depends on the age and nature of the firm.

Gordon (1962) carried out study and concluded that stock price is affected by dividend payout. He developed a model and states that investors are indifferent between retained earnings and current dividend. In his study, supported and concluded that dividend policy affects the value of shares even in a situation in which the return on investment is equal to the capitalization rate that is  $(r = K_e)$ . It is assumed that investors have a preference for present dividends more than the future capital gain under the condition of uncertainty. This argument stresses that an increase in dividend pay-out ratio leads to increase in stock price for the reason that investors consider the dividend yield is less risky than the expected capital gain. Hence, investors required rate of return increases as the amount of decreases. It is clear that positive relationship between the amount of dividend and stock prices.

Basic assumptions of this model are as follows.

- The internal rate of return (r) and cost of capital (K<sub>e</sub>) are constant.
- The firm and its steam of earnings are perpetual.
- The corporate taxes are ignored.
- The firm is an all equity firm (i.e. no debt exits.)
- No external financing is available so retained earnings would be used to finance any expansion.
- The retention ratio (b) once decided upon is constant. Thus growth rate g = b. r. is constant.
- K<sub>e</sub> must be greater than g to get meaningful value.

According to Gordon, the market value of share is equal to present values of future streams of dividend. A simplified version of Gordon's model can be symbolically expressed as.

$$P = \frac{EPS(1-b)}{K_e - br}$$

Where,

P = Price of a share

EPS = Earnings per share

b = Retention ratio.

(1-b) = Dividend pay-out ratio.

 $K_e$  = Capitalization rate or cost of capital.

b.r. = Growth rate

According to this model following facts are revealed.

**Growth Firm** ( $\mathbf{r} > \mathbf{K_e}$ ): Share price tends to decline in correspondence with increase in pay-out ratio or decrease in retention ratio i.e. high dividends corresponding to earning leads to decrease in share price. Therefore, dividend and stock prices are negatively correlated in growth firm.

**Normal Firm** ( $\mathbf{r} = \mathbf{K_e}$ ): Share value remains constant regardless of change in dividend policies which means dividends and stock prices are free from each other.

**Declining Firm** ( $\mathbf{r} = \mathbf{K_e}$ ): Share price tends to rise in correspondence with rise in dividend pay-out ratio. It means dividend and stock prices are positively correlated with each other in declining firm.

Friend and Puckett (1964) conducted a study on the "Relationship Between Dividends and Stock Prices" by running regression analysis on the data of 110 firms from five industries in the year 1956 to 1958. These five industries were chemical industry, electric utilities, electronics, food and steel industry. These industries were selected to permit a distinction made between the results for growth and non growth industries and to provide a basis for comparison with result by other authors for earlier years. They also considered cyclical and no cyclical industries which they

covered. The study periods covered a boom year for the economy when stock prices leveled off after rise (1956) and a somewhat depressed year for the economy when stock prices however rose strongly (1958).

They used dividends, retained earnings and price earnings ratio as independent variables in their regression model of price function. They used supply function i.e. supply function also. In their dividend function, earnings last year's dividend and price earnings ratio is independent variables. They quoted that the dividend supply function was developed by adding to the best type of relationship developed by Linter.

Symbolically, their price function and dividend supply function are,

Price function: 
$$P_t = a + b D_t + C R_t + d (E/P)_{t-1}$$

Where,

 $P_t$  = Share price at time t

 $D_t$  = Dividends at time t

 $R_t$ =Retained earnings at time t

 $(E/P)_{t-1}$  = Lagged earning price ratio

Dividend Supply functions:  $D_t = e + f E_t + g D_{t-1} + h (E/P)_{t-1}$ 

Where,

 $E_t$  = Earnings per share at time t

 $D_{t=1}$  = Last year dividend

Their study is based on the following assumption,

- Dividends do react to year-to-year fluctuations in earnings.
- Price does not contain speculative components.
- Earning fluctuations may not sum zero over the sample.

Their regression results based on the equation of  $P_1 = a + bD_1 + cR_1$  showed the company's strong dividend and relatively weak retained earnings effect in of the five industries, i.e. chemical, foods, and steel etc. Again, they tested other regression equations by adding lagged earnings price ratio to the above equations and found the following equation:

$$P_{t} = a + b D_{t} + C R_{t} + d (E/P)_{t-1}$$

They found the following results: More than 80% of the variation in stock prices can be explained by independent variables. Dividends have a predominant influence on stock prices in the same time out of five industries but they found between the dividends and retained earnings coefficient are not quite so marked as in the first set of regression coefficient are closer to each other for all industries in both year except for steels in 1956, and the correlation are higher again except for steels.

They also calculated dividends supply equation i.e.  $D_t = e + fE_t + gD_{t-1} + h(E/P)_{t-1}$  and the dividend price equation for four industry groups in 1958. In their derived price equation it seems that there was no significant changes from those obtained from the single equation approach as explained above. They argued that the stock prices or more accurately the price earnings ratio does not have a significant effect on dividend payout. On the other hand, they noted that the retained earning effect is increased relatively in of the four cases tested. Further, they argued that their result suggests price effect on dividend supply are not a serious source of bias in the customary derivation of dividend and retained earnings effects on stock prices though such a bias might be marked if the disturbing effect of short run income movements are sufficiently great.

Further, they lagged price as a variable instead of lagged earnings price ratio and showed more than 90% of variation in stock prices can be explained by the independent variables and retained earnings receive greater relative weight then dividends in most of the cases. The only exception was steels and foods in 1958. They considered chemicals,

electronics and utilities as growth industries in these groups and the retained earnings effect was larger than the dividend effect for both years covered. For the other two industries namely foods and steels, there were no significant systematic differences between the retained earnings and dividend coefficient.

Similarly, they tested the regression equation of  $P_t = a + bD_t + CR_t$  by using normalized earning again. They obtained normalized earnings by subtracting dividends from normalized earnings. That normalized procedures was based on the period 1950 to 1961. Again they added prior year's normalized earning price variable and they compared the results. Comparing the result, they found that there was significant role of normalized price earnings ratio was constant. When they examined the later equation, they found that the difference between dividend and retained earnings coefficient might be able to increase prices somewhat by raising dividends in foods and steels industries.

They conducted more detailed examination of chemical samples. That examination disclosed that the result obtained largely reflected the under regression weighting given the firms with price deviating most from the average price in the sample of twenty firms and retained earnings as a price determinants.

Finally, Friend and Puckett concluded that it is possible that management might be able at least in some measure to increase stock prices in non growth industries by raising dividends and in growth industries by greater retention i.e. low dividends.

Van Horne & Mc Donald (1971) conducted a study on "Dividend Policy and New Equity Financing". The purpose of this study was to investigate the combined effect of dividend policy and new equity financing decision on the market value of the firm's common stocks. They explored same

basic aspects of conceptual framework, and empirical tests were performed during year end 1968, for two industries, using a well known valuation model, i.e., a cross- section regression model. The required data were collected from 86 electric utility firms included on the COMPUSTAT utility data tape and 39 firms in the electronics and electronic component industries as listed on the COMPUSTAT industrial data type.

They tested two regression models for utilities industries.

First Model was,

$$P0/E0 = a0 + a1 (g) + a2 (D0/E0) + a3(lev) + u^{18}$$

Where,

P0/E0 = Closing market price in 1968, divided by average EPS for The Second Model was,

$$P0/E0$$
 =  $a0+a1$    
  $(g)+a2(D0/E0)+a3(lev)+a4(Fa)+a5(Fb)+a6(Fc)+a7(Fd)+u^{19}$ 

Where,

Fa, Fb, Fc and Fd are dummy variables corresponding to "new issue ratio" (NIR) groups A through D.

It is noted that they had grouped the firms in five categories A, B, C, D and E by NIR. For each firm the value of dummy variables representing its NIR group is one and the values of remaining dummy variables are zero. Again, they tested the following regression equation for electronic components industry.

Where,

$$P0/E0 = a0+a1+(g) + a2(D0/E0)+a3(lev) + a4(OR)+u^{20}$$

Lev = Financial risk, measured by long-term debt plus preferred stock dividend by bet worth as of the end of 1968.

OR = Operating risk, measured by the standard error for the regression of per earnings per share on time for 1960 through 1968, and rests are as in first model above.

By using these models, they compared the result obtained for the firms which both pay dividends and engage in new equity financing with other firms in an industry sample. They concluded that for electric utility firms in 1968, share value was not adversely affected by new equity financing in the presence of cash dividends; expect for those in the lightest new issue group and it made new equity a more costly form of financing than the retention of earning. They also indicated that the payment of dividends through excessive equity financing reduces share prices.

**Pradhan** (1992) study on stock market behavior in a small capital market "A Study of Dividend Policies and Practices of Nepalese Enterprises" has been conducted based on views of 135 managers on dividend policy of large Nepalese enterprises. A questionnaire was provided to the financial executives of 50 large Nepalese enterprises as identified in the publication of securities boards, Nepal and Nepal Stock Exchange Ltd. out of 50 enterprises. They research on 36 financial sectors and on 14 non-finance sectors.

The main objective of that study is to examine managements' view on various aspects of dividend policy and practices in Nepal. The major findings on the study are as follows.

- In their ranks for the importance of major decision of finance, respondents give third priority to dividend decision.
- With respect to major motives for paying cash dividend that it is to convey information to shareholders that the company is doing well and is to draw attention from the investment community.
- Dividend decision is not a residual decision.

- Nepalese shareholders are not really indifferent to whether the company pays or does not pay dividend.
- The earnings announcement by the company would help to increase market price of share.
- In Nepal most of the companies do not want to pay dividend.
- Dividend policy is affected by earning availability stock price.

Walter (1996) carried out a study on "Dividend policy: its Influence on the Value of the Enterprise" and argues that the choice of dividend policies usually affect the value of firm. Walter argues that dividend policies almost always affect the value of the enterprise. The investment policy of a firm van not is separated from its dividend policy which is just opposite of what MM said. The key argument in support of the relevance proposition of this model is the relationship between the return of firm's investment or its internal rate of return(r) and its cost of capital (k). As long as the internal rate of return (r) is greater than the Cast of capital (k), the stock price will be enhanced by retention and will very inversely with dividend payout.

Basic assumptions of this model are;

- The firm has perpetual life.
- The value of EPS and DPS are assumed to remain constant forever in determining a given value.
- The firm's internal rate of return(r) and cost of capital (k) are constant.
- The firm distributes its entire earnings or retains it for reinvestment immediately.
- The firm finances all investment through retained earnings, that is debt or new equity is not issued.

Based on above assumption, Walter's formula to determine the market price per share is as follows.

$$P = \frac{DPS}{K} + \frac{r/k (EPS - DPS)}{K}$$

Where,

P = Market price per share.

DPS = Dividend per share.

EPS = Earnings per share.

R = Internal rate of return.

K = Cost of capital.

According to Walter's model, the optimum dividend policy depends on the relationship between the firm's internal rate of return and its cost of capital (k). Walter suggested different dividend policy for different types of firm, they are;

**Growth Firm** (**r**>**k**): Growth firms are those firms which he expends rapidly because of ample investment opportunity; cost of capital or expected rate f return of shareholders. This firm will maximize the value per share if they follow a policy of retaining all earning for investment. Thus, the correlation between dividend and stock price is negative such firm optimal dividend pay-out is zero.

**Normal Firm** ( $\mathbf{r} = \mathbf{k}$ ): The firms whose internal rates of return and cost of capital being equal are called normal firms. In such firms whether retains the profit or distributes dividend is matter of indifference. Means, Firm,s dividend pay-out ratio don,t affect share price.

**Declining Firm** (r < k): In contact of growth firm, if a firm doesn't have profitable investment opportunities, the shareholders will be better off if earnings are paid out to them so as to enable them to earn a higher return hr using the funds elsewhere. In other words id firm's rate of return (r) is

less than lost of capital(k) the relation between dividends and stock price is positive, i.e. increase in DPS yields increase in marker price per share. Thus, optimum payout ratio for a declining firm is 100 percent.

#### 2.3 Review of Journals/Articles

Ojha (2000) published an article "Financial Performance and Common Stock Pricing." his objectives of this study were to study and examine the difference of financial performance and stock prices, to examine the relationship of dividends and stock price and to explore the signaling effects in stock price and his major findings of his study were 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. That's why payout ratio and dividend yields have been highly fluctuating. Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market. There is significant positive correlation between the dividends paid and stock prices of banking and manufacturing industries. All other have not a perfect correlation between the net worth per share and common stock price.

**Timilsina** (2001) published an article "Capital Market Development and Stock Price Behaviors in Nepal" 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. Also 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. Timilsina concluded that 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.

Charles and Christopher (2002), in his article "Do Banks Provide Financial Slack?" their main hypothesis is that the banks have the ability accurately price financial claims thus including a preference for undervalued firms to choose bank debts as their marginal financial source. They refer to this escapes that this information benefit will be weighed against the verity of contracting costs in a firms ultimate financing choice since they expect that these firms are the most likely to be undervalued, these financing are consist dent with the presence of and information. Benefit to bank debt finance. For identify whether the firms weighted these information benefits of bank finance against other contracting costs they examine the variation. In the sensitivity of the bank loan likelihood to their variables measuring potential under valuation they the find that firms with public debt outstanding tend to exhibit a relatively low sensitivity of bank loan likelihood to these variables. .since they accept that the contracting cost of bank debt information benefits of bank debt against the contracting costs.

The result suggest that for firms with public securities market for the firms to cross the threshold where the information benefits of bank debt finance outweigh the relatives contracting costs. Agricultural projects center has submitted in their report on where "ongoing evaluation of intensive Banking program in (October 1985)" this study has widely covered the whole aspects of IBP. It says due to the wide net work of

commercial banks they have now 346 branches at present and the huge amount of ideal funds estimate at Rs.3226 million in 1984/85 lying with them. The investment of commercial banks in the priority sectors areas seems justified. To generate intensive for commercial banks, it has necessary to raise the interest rate which would sufficiently cover up the cost leading leave some profit margin as well. As the indirect cost of borrowing small loan between two to thousand rupees is six percentages some active measure could be taken to dower this rate to compensate the small borrows for the proposed rise in the rate of interest.

#### 2.4 Review of Thesis

Previous studies relating to Nepalese banking sector have been most important and relevant for this study. Some of the earlier studies about the dividend policy have been reviewed. Reference of these studies has become very useful for researcher to complete this dissertation.

**Shah** (2008) carried out a research on "Cash Dividend Practice and its Impact on Share Price in Nepal". It covered 5 years period (2004-2008) including commercial banks, manufacturing companies, development banks, insurance companies, and financial institutions and hotels sectors. The Main objectives of the study are as follows.

- Its basic objectives were to evaluate the trend of cash dividend forecasting and payment by the Nepalese financial institution and to see and examine the impact of cash dividend on market price per share.
- To achieve these objectives, the information are interpreted and analyzed by using regression model and hypothesis test.

The Major findings of the study are as follows.

- Commercial banks of Nepal are seen the regular dividend paying financial institution.
- In average 90% companies pay less than 50% cash dividend. The company having good earning only have been paying regular cash dividend.
- The lack of financial knowledge and the market inefficiency has affected the market price of the share in all the firms. But it is theoretically argued.

Timsina (2009) carried out a research on "A Study on Dividend Policy and Its Impact on Stock Price of Selected Commercial Banks" concluded that: This study has covered the period of ten years being from 1999 to 2008. there are 26 commercial banks have been listed in NEPSE to date, however only 5 of them have been selected for analysis while conducting this study secondary data have been applied as well as some necessary information for analysis the data has been collected from some financial and managerial experts. Different financial and statistical tools have been applied for analyzing the data.

The major findings mentioned above led this study to conclude that there is notable dividend Impact on market price of the share in most of the banks. In another words dividend pays an important role to change the market price of the shares. Besides this the following conclusions are made:

- There is high degree positive relationship between DPS and EPS in most of the bank.
- There is normal positive relationship between DPS and EPS in most of the banks.
- While comparing the impact of EPS and lagged DPS on DPS, It is found that there is normal positive role of change in EPS to change the DPS but there is nominal or very less role of lagged DPS.CBL is highest of the firms.

 While observing the effect of dependent variable, i.e. DPS and MPS, on its independent variable, i.e. DPS, EPS and lagged DPS it is not sufficient information and meaning that there is a notable role of others, managerial and environmental factors.

**Gautam** (2011) carried out a research on "Dividend Policy in Commercial Banks" which focuses on the objectives to identify the type of dividend policy that is being adopted and to find out whether the policy. The Main objectives of the study are;

- To examine the impact of dividend on share price.
- To identify the relationship between DPS and other financial indicators.
- To know if there is any uniformity among DPS, EPS and DPR sampled commercial Banks.

The Major findings of the study are as follows.

- There is the largest fluctuation in EPS and DPS,
- The relationship between DPS and EPS is positive; however it is not significant. There may be various other factors beside EPS to affects MPS and the growth rate of dividend is inconsistent.
- It concluded that no sampled commercial banks have followed distinctly defined dividend policy.

**Budhathoki** (2012) carried on a research on "The Study of Dividend Policy of the Commercial Banks in Nepal" the Main objectives of the study are as follows.

- To highlight the dividend practices of Commercial Banks,
- To compare the dividend policy followed by different commercial banks chosen,

• To provide the sample banks with some fruitful suggestion that can be implemented easily and possible guideline to overcome various issues and gaps based on the findings of the analysis.

The Major findings of the study are as follows.

- The average earning per share (EPS) of the banks under study shows a positive result. But the coefficient of variation indicates that there is no consistency of EPS.
- The average dividend per share (DPS) shows that there is no regularity in dividend payment.
- The analysis of DPR shows that the Dividend Payout Ratio (DPR) of the banks is not stable.
- The average market price shows that there is quite high level of fluctuation.

**Dahal** (2013) carried out the research on the topic "Dividend and stock Price" the major objective of study was to know about the influence in price caused by dividend policy of the Nepalese commercial banks. The specific objectives of his study were as follows.

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

The main findings of his study were as follows.

- The relationship between dividend per share and stock price is positive in the sample companies.
- DPS affects the share price differently in different sector.
- By changing the dividend policy or DPS might help to increase the MPS.

- The relationship between stock prices and retained earnings per share is not important.
- The relationship between stock price and lagged earning price ratio is negative.

**Gyalang** (2013) carried out the research on the topic "Dividend Policy of Nepalese Commercial Banks" the basic objective of the study is to make comparative analysis of dividend policy of selected banks but the specific objective are as follows.

- To identify dividend policy of selected Banks
- To analyze the relationship of financial indicators such DPS, EPS and DPR, PE Ratio, Liquidity Ratio and Profitability Ratio on Market Value Per Share(MVPS) Per Share.
- To explore if there is any uniformity among DPS, EPS and DPR on the two sample commercial banks.
- Find out the impact of dividend on market price per share.

The main findings of his study were as follows.

- The sample banks have not clearly defined dividend policy.
- The sample banks have got sufficient earnings but some of the banks are paying high dividend and others are paying low dividend.
- Dividend per share is not more stable than the dividend payout ratio that,s why dividend per share and other variable have been highly fluctuated.
- Market price of share is affected by dividen distribution.

# Research Gap

The above studies subject's matters are carried out by different researchers. Since, the weakness and drawbacks are also mentioned there with. The study has covered two commercial banks. Latest eight years have been analyzed with due consideration of EPS, DPS, DPR, YEILD ratios & MVPS. Taking in mind for more elaborate and extensive analysis, company wise analysis has also been made. All the above studies are conducted with the research title "A Study on Dividend Policy". As to research gap is concerned, there are many changes taken place in the dividend practices of commercial banks process as compared to the last few years. The most of the studies has been considered many more objectives which made their study more complicated but in this research report only four objectives are taken into study. Secondary data are considered in this research. Both financial as well as statistical tools like EPS, DPS, DPR, YEILD, ratios & MVPS mean, standard deviation, coefficient of variance, correlation and t-test are used in this research. Almost all the ratios have been applied to cover the analytical part and fulfill the objective of this study. It involves more recent data of sample banks for eight years (2065/066 to 2069/070).

## **CHAPTER - III**

## RESEARCH METHODOLOGY

Research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view. (Kothari, 1990: 81) Research methodology describes the methods and process, which has been applied in the entire aspect of the study. So in this study Research Methodology has been paid due attention to achieve the objectives of the study. A focus is given to the research design, sources of data, population and sample, method of analysis, tools defined about certain financial indicators, test of hypothesis and statistical tools used.

# 3.1 Research Design

The research design of this study will be more descriptive as well as analytical using the various phenomena related and influencing the dividend decision and market price of stock. For this purpose secondary data and information are obtained from different reliable sources and primary data are obtained through questionnaire survey. This study is carried out by using quantitative analysis method. Mostly, secondary data has been used for analysis; hence, research design of this study is based on descriptive and analytical method.

#### 3.2 Sources of Data

Mainly the study is conducted on the basis of secondary data. The data relating to the dividend are obtained from Nepal Stock Exchange. The supplementary data and information are obtained from annual reports of BOK and EBL and Banking and financial statistics of Nepal Rastra Bank.

# 3.3 Population and Sample

The population of this study is all commercial banks operating in Nepal nowadays, there are 31 commercial banks are operating in Nepal. The sample consists of two selected bank. The sample consists 6.45% of the total population. Judgmental sampling method is to be used while selecting sample organizations for this study. The selected sample bank for the analysis are as follows.

- 1. Everest Bank Limited.
- 2. Bank of Kathmandu Limited.

## 3.4 Data Analysis Tools

Various financial and statistical tools to be used in this study. The analysis of data will be done according to pattern of data available. Mainly the analysis will be done by using financial tools and simple statistical analysis.

#### 3.4.1 Financial Tools

Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss account.

#### a. Earnings per Share (EPS)

EPS is calculated to know the earning capacity and to make comparison between concerned banks. EPS in defined as the result received by dividend net profit after taxes by no of common stock outstanding.

$$EPS = \frac{Net\ Profit\ Afert\ Tax}{No.of\ Common\ Stock\ Outstanding}$$

## b. Dividend per Share (DPS)

DPS indicates the part of earning distributed to the shareholders on per share basis and calculated by dividing the total dividend to equity shareholders by the total no. of equity shares.

$$DPS = \frac{Total\ Divident}{No.of\ Common\ Stock\ Outstanding}$$

## c. Dividend Pay-out Ratio (DPR)

DPR is calculated to indicate percentage of the profit on share that is distributed as dividend. Using following DPR can calculate;

$$DPR = \frac{Divident\ Per\ Share}{Earning\ Per\ Share}$$

And, Retention Ratio = 1- DPR

### d. Price Earnings Ratio (P/E Ratio)

PE Ratio reflects the price currently paid by the market for each rupee of currently reported earnings per share. It is calculated dividing the market value per share by earning per share.

$$PE Ratio = \frac{Market Value Per Share}{Earning Per Share}$$

## e. Earning Yield

Earning Yield and Dividend Yield both are expressed in terms of the market value per share. Earning Yield and Dividend yield are two important profitability ratios from the point of view of the ordinary shareholders. The earning yield may define as the ratio of earning per share to the market value per ordinary share and earning yield is calculated as;

Earning Yield = 
$$\frac{Earning Per Share}{Market Value Per Share}$$

#### f. Dividend Yield

The dividend yield reflects percentage relationship between dividend per share and market value per share. It is calculated through dividing the dividend per share by the market value per share.

Dividend Yield = 
$$\frac{Dividend \ Per \ Share}{Market \ Value \ Per \ Share}$$

## g. Market Value per Share to Book Value per Share Ratio

This ratio indicates the price the market is paying for the price that is reported from the net worth of the banks or other words it is the price of the outsiders are paying for each rupee reported by the balance sheet of the banks. It is calculated by the dividing the market value per share.

MVPS to BVPS = 
$$\frac{Market\ Value\ Per\ Share}{Book\ Value\ Per\ Share}$$

#### 3.4.2 Statistical Tools

Statistical tools are used to analyze the relationship between two variables and to find how these variables are related. In this study, following statistical tools are used.

#### a. Arithmetic Mean or Average

The mean or average value is a single value within the range of the data that is used to represent all the values in the series. Since an average is somewhere within the range of the data, it is also called a measure of central value. It is calculated by;

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

Where,

 $\overline{X}$  = Arithmetic Mean

 $\sum X$  = Sum of values of all items, and,

N = Number of items

#### **b.** Standard Deviation

The standard deviation is the measure that is most often used to describe variability in data distributions. It can be thought of as a rough measure of the average amount by which observations deviate on either side of the mean. Denoted by Greek letter's (read as sigma), standard deviation is extremely useful for judging the representatives of the mean. Standard deviation is calculated as;

Standard deviation(
$$\sigma$$
) =  $\sqrt{\frac{\sum (X - \bar{x})^2}{n-1}}$ 

Where,

 $\sigma$  = Standard deviation

 $\sum (\mathbf{X} - \bar{\mathbf{x}})^2$  = Sum of squares of the deviations

measured from arithmetic average.

n = Number of items

#### c. Coefficient of Variation

The coefficient of variation is the ratio of standard deviation to the mean for a given sample multipled by 100 and used to measure spread. It can also be thought of as the measure of relative risk. The larger the coefficient of variation, the greater the risk relative to the average. Mathematically,

$$CV = \frac{\sigma}{\overline{x}} \times 100$$

Where,

Cv = Cofficient of Variation

 $\sigma$  = Standard Deviation

 $\overline{X}$  = Arithmetic Mean

#### d. Coefficient of Correlation

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the tudy because of the simplisity and suitable for the nature of data. The result of coefficient of correlation is always lie between +1 and -1. The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

r = Correlation coefficient

 $\sum x_1 \quad = \quad X_1 \, {\scriptscriptstyle \text{\tiny $T$}} \, \overline{X}_1$ 

 $\sum x_2 = X_2 - \overline{X}_2$ 

### e. Assessment of the Sample Corrlation Cofficient

For this study, t-test for significance of an observed and sample correlation cofficient is used. Suppose a random sample of size 'n' has been drawn from a bivariate normal population and let 'r' be the observed sample correlation coefficiet. In order to test of the sample correlation coefficient 'r' is sognificant of any correlation between the variables in the population or it is just due to fluctuating of sampling, we used t-test for significance of an observed sample correlation as follows;

## Set up Hypothesis

Null hypothesis  $(H_0)$ ;  $\rho = 0$  i.e. There is no correlation between the considerred variables.

Alternative Hypothesis (H<sub>1</sub>);  $\rho \neq 0$  i.e. There is significant correlation between the considerred variables.

Test statistic under  $H_0$ ;

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

Where,

r = Sample correlation between two variables

r<sup>2</sup> = Sample correlation Coefficient

n = No of Pair of ovservations

**Level of significance:** Level of significance  $\propto = 5\%$ 

**Critical Value:** Tabulated or critical value of t at  $\propto$  % level of significance for (n - 2) degree of freedom obtain from 't' tables.

**Decision:** If calculated 't' is less then or equal to tabulated value of 't' it falls in the accepted region and the null hypothesis is accepted and if calculated 't' is greater then tabulated 't' null hypothesis is rejected.

### e. Independent t-test

In order to answer whether the average value of DPS, EPS, MVPS, BVPS etc. are significantly different or not between these two sample banks, independent t- test has been applied.

**Null hypothesis** ( $\mathbf{H_0}$ );  $\mu_1 = \mu_2$  i.e. there is no significance difference between the average value of two sample banks.

Alternative Hypothesis (H<sub>1</sub>);  $\mu_1 \neq \mu_2$  i.e. there is significance difference between the average value of two sample banks.

### Test statistic under $H_0$ ;

$$t = \frac{(\overline{X}_1 - \overline{X}_2)}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

 $\overline{X}_1$  = Sample mean value of  $X_1$  series

 $\overline{X}_2$  = Sample mean value of  $X_2$  series

 $n_1$  = No of  $X_1$  series

 $n_2$  = No. of  $X_2$  series

 $S^2 = \frac{n_1 s_1^2 + n^2 s_2^2}{n_1 + n_2 - 2}$ 

 $s_1^2$  = Variance of  $X_1$  series  $(\sigma_1)^2$ 

 $s_2^2$  = Variance of  $X_2$  series  $(\sigma_2)^2$ 

**Level of significance:** Level of significance  $\propto = 5\%$ 

**Critical Value:** Tabulated or critical value of t at  $\propto$  % level of significance for  $(n_1 + n_2 - 2)$  degree of freedom obtain from t tables.

**Decision:** If calculated 't' is less then or equal to tabulated value of 't' it falls in the accept region and the null hypothesis is accepted and if calculated 't' is greater then tabulated 't' null hypothesis is rejected.

## **CHAPTER - IV**

## PRESENTATION AND ANALYSIS OF DATA

To find the answer of research problem, the collected data are necessary to present and analyze by processing. This chapter will present the data on table & figure. The main objective of the study is to present data and analyze them with the help of various financial and statistical tools.

# 4.1 Analysis of Financial Indicators and Variables

## 4.1.1 Dividend Per Share Analysis

Dividend per share indicates the portion of earning distributed in the shareholders on per share basis. It gives financial soundness of the company. Only financially strong companies can distribute dividend. It attracts investors to invest in shares of stock and maintains goodwill. It is an investment in shares of stock and maintains goodwill. It is calculated by dividing the total dividend to equity share holders by the number of ordinary share outstanding.

Table: 4.1

Dividend per Share of Sample Banks/(In % of Par Value Rs. 100)

Year		BOK			EBI	
	Cash	Share	Total	Cash	Share	Total
2065/066	7.37	40	47.37	30	30	60
2066/067	15	15	30	30	30	60
2067/068	16.75	18	34.75	50	10	60
2068/069	21.32	5	26.32	0	30	30
2069/070	0.74	14	14.74	50	10	60
Mean	12.24	18.40	30.64	32.00	22.00	54.00
SD	8.16	13.01	11.92	20.49	10.95	13.42
C.V	66.69%	70.71%	38.92%	64.04%	49.79%	24.85%

Source: Annual Reports of Sample Banks from 2065/066 to 2069/070

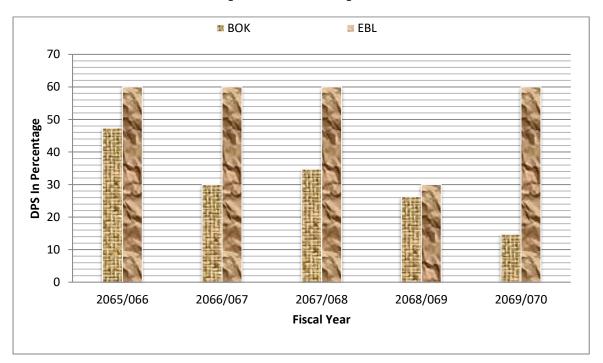


Table: 4.1

Dividend per Share of Sample Banks

Table 4.1 shows the dividend per share of the concerned banks from the year 2065/066 to 2069/070. BOK has pain cash dividend 7.37% and stock dividend 40% in the fiscal year 2065/066 and the cash dividend rate is increase up to fiscal year 2068/069 but decrease to 0.74% in the fiscal year 2069/070. Similarly, the EBL paid 30% cash & 30% stock dividend in the fiscal year 2065/066 after that the cash dividend is increase but stock dividend is fluctuating each year. In the fiscal year 2069/070 EBL has not paid any cash dividend. The total dividend of BOK is fluctuating each year and BOK has not any stable dividend but EBL has stable dividend policy.

Comparing to BOK with the average value of 30.64% the EBL is better with the average value of 54%. The Standard Deviations of BOK and EBL are 11.92% and 13.42% respectively, it means BOK has less variability in compare to EBL. The CV of DPS of BOK and EBL are 38.92% and 24.85% respectively which indicate that BOK is more variable than EBL. EBL is more consistent or less variable than BOK.

## **4.1.2** Earnings Per Share (EPS)

Earnings per share refer the rupee amount earned per share of common stock outstanding. It measures the profitableness of the shareholders investment. The earnings per share show the profitability of the banks on a per share basis. The higher earning indicates the better achievements in terms of profitability of the banks by mobilizing their funds and vice versa. In other words, the EPS indicates the strength and weakness of the bank.

Earnings per share are computed to know the earning capacity and to make comparison between concerned banks. This ratio can be computed by dividing the earning available to common shareholders by the total number of common stocks outstanding.

Table: 4.2
Earnings per Share

(In Rs.)

	(=== === =)
вок	EBL
54.68	99.99
43.08	100.16
44.51	83.18
37.88	88.55
36.64	91.88
43.36	92.75
7.15	7.37
16.50%	7.95%
	54.68 43.08 44.51 37.88 36.64 43.36 7.15

Source: Annual Reports of Sample Banks from 2065/066 to 2069/070

Table and figure 4.2 shows the EPS of the concerned banks from 2065/066 to 2069/070. Normally, the performance and the achievement of business organization are measured in terms of its capacity to generate earning. Higher earnings show higher strength while lower earnings show weaker strength of business organization.

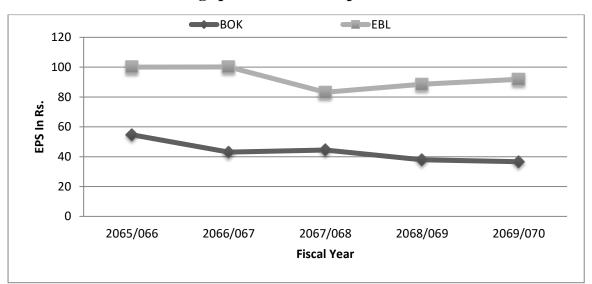


Table: 4.2
Earnings per Share of Sample Banks

In the fiscal year 2066/067, the table shows that the EPS of EBL is highest over the study period, which amount to Rs. 100.16 and the BOK highest EPS is Rs. 54.68 in the fiscal year 2065/066. The EPS of BOK has fluctuating trend over the study period and it reached to Rs.36.64 in the fiscal year 2069/070. But the EPS of EBL is in increases each year than previous year except the fiscal year 2067/068. In comparisons to BOK, EBL has higher EPS each year during the study period. Comparing to BOK with the average value of Rs.43.36 the EBL is better with the average value of Rs.92.75. The Standard Deviations of BOK, and EBL are Rs.7.15 and Rs. 7.37 Respectively, it means BOK has less variability in compare to EBL. The CV of EPS of BOK and EBL are 16.50% and 7.95% respectively which indicate that BOK is more variable than EBL. EBL is more consistent or less variable than BOK.

# 4.1.3 Dividend Payout Ratio (DPR)

DPR is the proportion of earnings paid in the form of dividend. This ratio reflects what percentage of profit is distributed as dividend and what percentage of profit is retained as reserve and surplus for the growth of the company. It is calculated by dividing by EPS.

Table: 4.3

Dividend Payout Ratio

(**DPR** in %)

Year	вок	EBL
2065/066	13.48	30.00
2066/067	34.82	29.95
2067/068	37.63	60.11
2068/069	56.28	0.00
2069/070	2.02	54.42
Mean	28.85	34.90
SD	21.34	23.89
C.V	73.98%	68.46%

Source: Annual Reports from 2065/066 to 2069/070 and Appendix-I

Figure: 4.3

Trend of Dividend Payout Ratio (DPR in %)

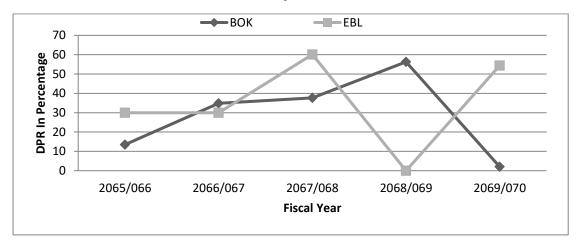


Table and Figure 4.3 show the dividend payout of the concerned banks from the year 2065/066 to 2069/070. In the year 2068/069, BOK applied moderate dividend policy and paid dividend 56.28%, but in this fiscal year EBL has not paid any cash dividend. EBL is paid 60.11% cash dividend in the fiscal year 2067/068. The dividend payout ratio of BOK is increases each year than previous year except the fiscal year 2069/070. In the fiscal year 2069/070 BOK is paid only 2.20% of cash dividend. Similarly the dividend payout ratio of EBL is fluctuating each year during the study period.

Comparing to BOK with the average value of 28.85% the EBL is better with the average value of 34.90%. In average both the banks are adopted the moderate dividend policy. The Standard Deviations of BOK and EBL are 21.34% and 23.89% respectively, it means BOK has less variability in compare to EBL. The CV of DPR of BOK and EBL are 73.98% and 68.46% respectively which indicate that BOK is more variable than EBL. EBL is more consistent or less variable than BOK.

# 4.1.4 Pricing Earning Ratio (P\E Ratio)

P\E ratio indicates the price currently paid by the market for each rupee \ dollar of currently reported earnings per share (EPS). It is also called the earning multiplier. It is the ratio between market price per share and earnings per share. The higher the P\E ratio implies the market share price of a stock given the earning per share and the greater confidence of investors in the firm's future. It is calculated by the dividing market price per share (MPS) by earning per share (EPS). The P\E ratio measures investment's expectation and market appraisal of the performance of the firm.

Table: 4.4
Price Earnings Ratio

(In Times)

Year	BOK	EBL
2065/066	33.37	24.55
2066/067	19.50	16.27
2067/068	12.81	13.15
2068/069	16.58	11.67
2069/070	15.09	17.32
Mean	19.5	16.6
SD	8.1	5.0
C.V	41.8%	30.1%

Source: Annual Reports of sample banks from 2065/066 to 2069/070

-BOK 40 35 <sup>2</sup>/E Ratio In Times 30 25 20 15 10 5 0 2065/066 2066/067 2067/068 2068/069 2069/070 Fiscal Year

Figure: 4.4
Price Earnings Ratio

Table 4.4 depicts the price earnings ratio of the sample banks. This helps to classifying the relationship between earning per share and market price per share. BOK has the highest PE Ratio of 33.37 times and EBL has 24.55 times in the fiscal year 2065/066. In all fiscal year except the fiscal year 2069/070, price earnings ratio of BOK is higher than EBL. A high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. However, the P/E ratio doesn't tell us the whole story by itself. It's usually more useful to compare the P/E ratios of one company to other companies in the same industry, to the market in general or against the company's own historical P/E.

Comparing to BOK with the average value of 19.5 times the EBL is better with the average value of 16.6 times. The Standard Deviations of BOK, and EBL are 8.1 and 5 times respectively, it means BOK has more variability in compare to EBL. The CV of PE ratio of BOK and EBL are 41.8% and 30.1% respectively which indicate that BOK is more variable than EBL. EBL is more consistent or less variable than BOK.

# 4.1.5 Dividend Yield (DY)

The dividend yield reflects the percentage relationship between dividend per share and market value per share. It measures the dividend in relation to market value of the investors as a percentage of market prices per share in the stock market. It is calculated by dividing the cash dividend per share (DPS) by the market price per share (MPS). This ratio highly influences the MPS because a small change in DPS can bring effective changes in the market value per share.

Table: 4.5
Dividend Yield Ratio

(In Percentage)

Year	BOK	EBL
2065/066	0.40	1.22
2066/067	1.79	1.84
2067/068	2.94	4.57
2068/069	3.39	0.00
2069/070	0.13	3.14
Mean	1.73	2.16
SD	1.46	1.76
C.V	84.40%	81.77%

Source: Annual Reports from 2065/066 to 2069/070 and Appendix-II

Figure: 4.5
Dividend Yield Ratio

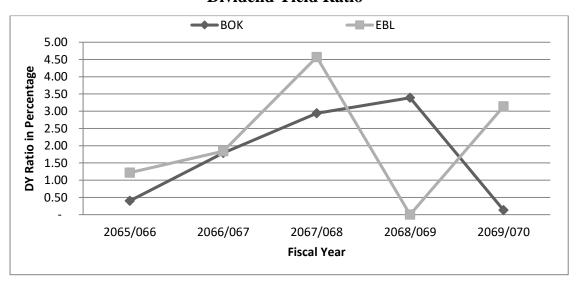


Table and Figure 4.5 shows dividend yield analysis for the year 2065/066 to 2069/070. Dividend yield highly influences the market value per share because a change in dividend per share can bring effective change in the market value of the share. Therefore, before allocation of dividend to share holders the impact on market scenario and price fluctuation is to be studied and evaluated for the long run survival of the bank.

In the year 2065/066, the data related to dividend yield of BOK is 0.40% and EBL is 1.22% acquire the shareholders. The highest dividend yield ratio of BOK is 3.39% and EBL is 4.57% in the fiscal year 2068/069 & 2067/068 respectively. The dividend yield ratio of EBL is greater than BOK in each fiscal year except the fiscal years 2068/069.

Dividend Yield Ratio of BOK is increases each year than previous year except the fiscal year 2068/070. Comparing to BOK with the average value of 1.73% the EBL is better with the average value of 2.16%. The Standard Deviations of BOK and EBL are 1.46% and 1.76% respectively, it means EBL has more variability in compare to BOK. The CV of DY ratio of BOK and EBL are 84.40% and 81.77% respectively which indicate that BOK is more variable than EBL. BOK is less consistent or more variable than EBL.

#### 4.1.6 Earning Yield (EY)

Earning Yield and Dividend Yield both are expressed in terms of the market value per share. Earning Yield and Dividend yield are two important profitability ratios from the point of view of the ordinary shareholders. The earning yield may define as the ratio of earning per share to the market value per ordinary share.

Table: 4.6
Earning Yield Ratio

(In Percentage)

Year	вок	EBL
2065/066	3.00	4.07
2066/067	5.13	6.14
2067/068	7.81	7.60
2068/069	6.03	8.57
2069/070	6.63	5.77
Mean	5.72	6.43
SD	1.81	1.73
C.V	31.59%	26.96%

Source: Annual Reports from 2065/066 to 2069/070 and Appendix-III

Figure: 4.6
Earning Yield Ratio of Sample Banks

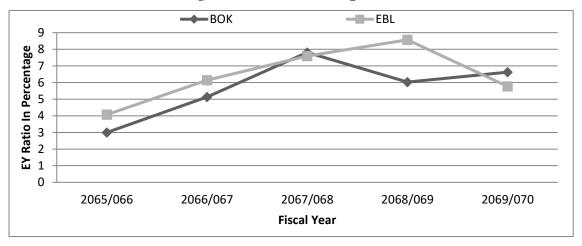


Table and Figure 4.6, shows the earning yield ratio of BOK and EBL from 2065/066 to 2069/070. Both the banks have fluctuating rate of earning yield ratio. The highest earning yield ratio of BOK is 7.81% and EBL is 8.57% in the fiscal year 2066/067 & 2067/068. The earning yield ratio of EBL is greater than BOK in each fiscal year except in the fiscal year 2067/068 & 2069/070. Comparing to BOK with the average value of 5.72% the EBL is better with the average value of 6.43%. The Standard Deviations of BOK and EBL are 1.81% and 1.73% respectively, it means BOK has more variability in compare to

EBL. The CV of EY ratio of BOK and EBL are 31.59% and 26.96% respectively which indicate that BOK is less variable than EBL. EBL is more consistent or less variable than BOK.

## 4.1.7 Market Value per Share to Book Value per Share Ratio

This ratio measures the market situation in the competitive open market with respect to book value per share (BVPS) of the firm. This ratio indicates the price, the market is paying for the share that reported form the banks, or in other words, it is the price of the outsiders, are paying for each rupee reported by the balance sheet of the banks.

Table: 4.7
Market Value per Share to Book Value per Share Ratio

(In Times)

Year	BOK	EBL
2065/066	18.25	24.55
2066/067	8.4	16.3
2067/068	5.7	10.94
2068/069	6.28	10.33
2069/070	5.53	15.91
Mean	8.83	15.61
SD	5.39	5.70
C.V	61.00%	36.55%

Source: Annual Reports from 2062/063 to 2069/070 and Appendix-IV

Table 4.7 & Figure 4.7 show that both the banks have decreasing trend of market value per share to book value per share ratio from the fiscal year 2065/066 to 2067/068 after that the ratio is increases up to the fiscal year 2069/070. The highest ratio of BOK is 18.25 times and EBL is 24.55 times in the fiscal year 2065/066. The market value per share to book value per share ratio of EBL is greater than BOK in each fiscal year. Comparing to BOK with the average value of 8.83 times the EBL is better with the average value of 15.61 times. The Standard Deviations of BOK and EBL are 5.39 times and

5.70 times respectively, it means EBL has more variability in compare to BOK. The CV of market value per share to book value per share ratio of BOK and EBL are 61% and 36.55% respectively which indicate that EBL is less variable than BOK. EBL is more consistent or less variable than BOK.

**EBL** ■ BOK 30 25 Ratio in Times 20 15 10 5 0 2065/066 2066/067 2068/069 2069/070 2067/068 **Fiscal Year** 

Figure: 4.7

Market Value per Share to Book Value per Share Ratio of Sample Banks

# 4.2 Correlation Analysis

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between to sets of figures. One of the very convenient and useful way of interpreting the value of coefficient of correlation (r) between the two variables is coefficient of determination, which is denoted by r². It explains the total variation in dependent variable is explained by independent variable.

The significant of coefficient of correlation (r) is tested with the help of 't' test. If calculated 't' is less then or equal to tabulated value of 't' it falls in the accepted region and null hypothesis is accepted or 'r' is not significant of

correlation in the population and if calculated 't' is greater then tabulated 't' null hypothesis is rejected or 'r' is significant of correlation in the population.

# 4.2.1 Relationship between DPS & EPS

Correlation coefficient between DPS & EPS measures the degree of relationship between DPS and EPS. DPS is dependent variable  $(X_1)$  and EPS is independent variable  $(X_2)$ . The purpose of computing is to find out the relationship between DPS and EPS is going to same direction or opposite direction.

Table 4.8

Correlation between DPS and EPS

Factors	Banks		
	ВОК	EBL	
r	-0.0993	-0.1371	
r²	0.0098	0.0188	
Calculated 't' Value	0.1712	2227	
Tabulated 't' Value	2.201	2.201	
Remarks	Insignificant	Insignificant	

Source: Appendix V & VI

The above table describes the relationship between DPS and EPS during the period of study. The coefficient of correlation (r) DPS and EPS are -0.0993 and -0.1371. This figure shows the negative association between DPS and EPS of both banks. It means DPS and EPS both move towards opposite direction.

The coefficient of determination (r<sup>2</sup>) is 0.0098 and 0.0.88 it shows that 0.98% and 1.88% of the variation in the dependent variable (i.e. DPS) has been explained by the independent variable (i.e. EPS).

The calculated 't' value of BOK is less than the tabulated value i.e. -0.0993 < 2.201, it show that the relationship between DPS & EPS is insignificant and the calculated 't' value of EBL is also less than the tabulated value i.e. -0.1372 <

2.201, therefore it reveals that the relationship between DPS and EPS is insignificant. The insignificant relationship between DPS & EPS of both banks may be the causes of small sample size.

## 4.2.2 Relationship between DPR & PER

Correlation coefficient between DPR and PER measures the degree of relationship between DPR and PER. DPR is independent variable  $(X_1)$  and total EPR is dependent variable  $(X_2)$ . The purpose of computing is to find out the relationship between DPR and PER is going to same direction or opposite direction.

Table 4.9
Correlation between DPR and PER

Factors	Banks		
	BOK	EBL	
r	-0.3363	0.1293	
r²	0.1131	0.0167	
Calculated 't' Value	0.5521	0.2259	
Tabulated 't' Value	2.201	2.201	
Remarks	Insignificant	Insignificant	

Source: Appendix VII & VIII

The above table describes the relationship between DPR and PER during the period of study. The coefficient of correlation (r) between DPR and PER of BOK is -0.3363, it show the low degree of negative correlation between DPR & PER. It means DPR and PER both move towards opposite direction. The coefficient of correlation (r) between DPR and PER of EBL is positive i.e. 0.1293, this figure shows the positive association between DPR and PER of EBL. It means DPR and PER both move towards opposite direction.

The calculated 't' value of BOK and EBL are less than the tabulated value i.e. 0.5521 < 2.201 and 0.2259 < 2.201 respectively, therefore it reveals that the

relationship between DPR and PER is insignificant. The insignificant in the correlation coefficient might be because of the small sample size. The insignificant relationship between DPR & PER of both banks may be the causes of small sample size.

# 4.2.3 Relationship between DPS & MVPS

Coefficient of correlation measures the degree of relationship between two variables, DPS & MVPS. DPS is independent variable  $(X_1)$  and MVPS is dependent variable  $(X_2)$ . The purpose of computing is to find out the relationship between DPS and MVPS is going to same direction or opposite direction.

Table 4.10
Correlation between DPS and MVPS

Factors	Banks		
	BOK	EBL	
r	-0.2637	0.1519	
r²	0.0695	0.0230	
Calculated 't' Value	0.4416	0.2662	
Tabulated 't' Value	2.201	2.201	
Remarks	Insignificant	Insignificant	

Source: Appendix VIII & IX

From the Table-4.8, the values of coefficient of correlation (r) of BOK and EBL are -0.2637 and -0.1519 respectively which shows that there is a negative correlation between DPS and MVPS, therefore the value of coefficient of determination (r²) are 0.0695 and 0.0230 which shows that 6.95% and 2.30% of the total variation in dependent variable (MVPS) is explained by independent variable (DPS). The calculated 't' value of BOK and EBL are less than the tabulated value i.e. 0.4416 < 2.201 and 0.2662 < 2.201 respectively, therefore it reveals that the relationship between DPS and MVPS is insignificant. The

insignificant in the correlation coefficient might be because of the small sample size. The insignificant relationship between DPS & MVPS of both banks may be the causes of small sample size.

# **4.3** Hypothesis Test (Independent t-test)

In order to test whether the average value of DPS, EPS and MVPS, are significantly different or not between these two sample banks, independent t-test has been applied. For this study some set of null and alternative hypothesis have been formulated and tested.

 $\mathbf{H_0}$ : There is no significance difference between the average values of DPS of two sample banks.

 $\mathbf{H_1}$ : There is significance difference between the average values of DPS of two sample banks.

 $\mathbf{H_0}$ : There is no significance difference between the average values of EPS of two sample banks.

 $\mathbf{H_1}$ : There is significance difference between the average values of EPS of two sample banks.

 $\mathbf{H_0}$ : There is no significance difference between the average values of MVPS of two sample banks.

**H<sub>1</sub>:** There is significance difference between the average values of MVPS of two sample banks.

Table: 4.11
Independent t-test (T-Distribution)

Tested Variable	Mea	n ± SD	Degree Of Freedom	Level Of Significance	Calculated t -Value	Tabulated t - Value	Decision
	BOK	EBL					
DPS of Sample Banks	12.24 ± 8.16	32.00 ± 20.49	(5+5-2)=8	<b>∝</b> =5%	1.7919	2.306	H <sub>0</sub> Accepted
EPS of Sample Banks	43.36 ± 7.15	92.75 ± 7.37	(5+5-2)=8	<b>∝</b> =5%	9.6198	2.306	H <sub>0</sub> Accepted
MVPS of Sample Banks	883.2 ± 538.8	1560.6 ± 570.48	(5+5-2)=8	<b>∝</b> =5%	0.010	2.306	H <sub>0</sub> Accepted

Source: Appendix XI, XII and XIII

From the above table 4.13, it is found that the tabulated value of t-distribution is greater then calculated value in terms of DPS & MVPS by considering the test statistic. So, null hypothesis  $H_0$  is accepted and alternative hypothesis  $H_1$  is rejected, it means there is no significant difference between the mean value of DPS and MVPS of sample banks. In other words, both the banks are in the same position with respect to DPS and MVPS but in case of EPS it is found that the tabulated value of t-distribution is less then calculated value So, null hypothesis  $H_1$  is accepted and alternative hypothesis  $H_0$  is rejected, it means there is significant difference between the mean value of EPS of sample banks.

# 4.4 Major Findings

The major findings of the study derived from the analysis of financial as well as statistical tools of BOK and EBL are as follows.

- 1. In case of DPS, comparing to BOK with the average value of 30.64% the EBL is better with the average value of 54%. The CV of DPS of BOK and EBL shows that the EBL is more consistent or less variable than BOK (Table, 4.1).
- 2. In comparisons to BOK, EBL has higher EPS each year during the study period. The CV of EPS of BOK and EBL are 16.50% and 7.95%

- respectively which indicate that BOK is more variable than EBL (Table, 4.2).
- 3. In case of DPR, comparing to BOK with the average value of 28.85% the EBL is better with the average value of 34.90%. EBL is more consistent or less variable than BOK (Table, 4.3).
- 4. Comparing to BOK with the average value of 19.5 times of P/E ratio the EBL is better with the average value of 16.6 times. The CV of PE ratio of BOK and EBL are 41.8% and 30.1% respectively which indicate that BOK is more variable than EBL (Table, 4.4).
- 5. Dividend Yield Ratio of BOK is increases each year than previous year except the fiscal year 2068/070. Comparing to BOK with the average value of 1.73% the EBL is better with the average value of 2.16% (Table, 4.5).
- 6. The earning yield ratio of EBL is greater than BOK in each fiscal year except in the fiscal year 2067/068 & 2069/070. Comparing to BOK with the average value of 5.72% the EBL is better with the average value of 6.43% (Table, 4.6).
- 7. Comparing to BOK with the average value of MVPS 8.83 times the EBL is better with the average value of 15.61 times. The CV of market value per share to book value per share ratio of BOK and EBL are 61% and 36.55% respectively which indicate that EBL is less variable than BOK (Table, 4.7).
- 8. The coefficient of correlation (r) between DPS and EPS are -0.0993 and -0.1371 and the relationship between DPS & EPS are negative and insignificant of both banks (Table, 4.8).
- 9. The coefficient of correlation (r) between DPR and PER of BOK is 0.3363 and the correlation (r) between DPR and PER of EBL is positive i.e. 0.1293. However, the analysis reveals that the relationship between DPR and PER is insignificant of both banks (Table, 4.9).
- 10. The values of coefficient of correlation (r) of BOK and EBL are -0.2637 and -0.1519 respectively which shows that there is a negative correlation

- between DPS and MVPS and it is found that the relationship between DPR and PER is insignificant of both banks (Table, 4.10).
- 11. From the hypothesis test it is found that the null hypothesis  $H_0$  is accepted and alternative hypothesis  $H_1$  is rejected in case of DPS & MVPS but in case of EPS null hypothesis  $H_1$  is accepted and alternative hypothesis  $H_0$  is rejected (Table, 4.11).

### CHAPTER - V

# SUMMARY, CONCLUSIONS & RECOMMENDATIONS

# 5.1 Summary

Dividend decision of the firm is yet another crucial area of financial management. Dividend refers to the distribution of earning to common stockholders in return to their investment. Paying dividend to shareholders is an effective way to attract new investors to invest in shares. The important aspect of dividend policy is to determine the amount of earning to be distributed to shareholders and the amount to be retained in the firm. Retained earnings are the most significant internal sources of financing for the growth of the firm. Dividend policy refers to the issues of how much of the total profit, a firm should pay to its stockholders and how much to retain for investment so that the combined profit and future benefits maximize the wealth of stockholders.

Dividends are generally paid in cash because it is easy to pay to shareholders. What and how much it is desirable to pay dividend is always a controversial concern. Thus, in order to strike a balance between paying dividend and retained earnings, it is necessary for the firm to adopt and effective and relevant dividend policy. The firm's directors periodically meet in order to decide whether to pay dividend and to determine the amount and form of dividend payment. Dividend policy means some kind of consistent approach to the distribution versus retention decision. Dividend policy determines the amount of earnings to be retained and payout by the firm. Various questions related to the payment of dividend or retain the earnings are contained in the dividend policy. The dividend policy adopted by the firm should be such that it strikes the proper balance between the financing decision and wealth maximization decision. There is inverse relationship between the retained earnings and cash dividends. When the firm retains earning, providing necessary equity, the

amount of dividend decreases which may affect the market price of the stock adversely. This leads to the increase in future earnings per share.

Any change in dividend policy has both favorable and unfavorable effects on the firm's stock price. Higher the dividend means the immediate cash flows to investors, which is good but lower future growth is bad. Thus, the dividend policy should be optimal which balances the opposing forces and maximizes the stock price. The dividend policy affects financial structure, the flow of funds, corporate liquidity and investor's attitude; it is related to overall financing decision as dividend payout reduces the amount of retained earnings that are paid to shareholders in return to their investment. So the purpose of this study is to make comparative analysis of dividend policy of selected banks..

To fulfill the research objectives the study is divided into five chapters. In the first chapter, describes the major issues to be investigated along with the general background, brief profiles of the sample banks statement of problem, objectives, significance of the study, limitation of the study and organization of the study. Second chapter is devoted to theoretical analysis and brief review of related and pertinent literature available. It includes a discussion on the conceptual framework and review of the major studies in general. The third chapter describes the research methodology employed in the study. This chapter deals with the research design, source of data, methods of analysis, analysis of financial indicators and variables, test of hypothesis, definition of statistical tools etc. The Fourth Chapter deals with the presentation and analysis of data to indicated quantitative factors on dividend policy using statistical tools and techniques. This chapter also includes the major findings. The Fifth Chapter states summary, conclusion and recommendations, compares them with other empirical evidence to the extent possible and provides some suggestions.

### 5.2 Conclusions

Dividend decision is one of the major decisions of managerial finance as it directly or indirectly determines the company's profitability. Shareholders wealth can be maximized through dividend or capital gains. When a company pays dividend to the shareholders, then they are benefited directly. If the firm retains the earnings to exploit growth opportunities shareholders can expect to be benefited indirectly through increase in the price of their shares. In other words, it is a right dividend decision, which maintains a balance between shareholders interest with that of corporate growth from internally generated funds. The funds that could not be used due to lack of beneficial investment opportunities should be better paid as dividends.

The above mentioned major findings led this study conclude that the sample banks have got sufficient earnings but EBL is paying high dividend and BOK is paying low dividend. Other things remaining the same, dividend per share is not more stable than the dividend payout ratio. That's why dividend per share and other variable have been highly fluctuated. Another interesting conclusion is that market price of share is attracted by dividend. Lastly, the sample banks have not clearly defined dividend policy.

### 5.3 Recommendations

The recommendation is based on the empirical findings of the study and observation of the MVPS with DPS and other variables of sampled commercial banks and the empirical view of its impact of dividend on share price by the financial performance. The following recommendations are made.

• The DPS analysis shows that there is not any consistency of dividend policy in all the sample banks. Therefore, these banks need to create somehow paying reasonable DPS every year, it is because higher DPS creates positive attitude of shareholders & investors as the psychological value of shareholders is also valued as the assets of banks (Finding:1).

- The sample banks have 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 (Findings: 2, 3 & 4).
- The practices of dividend payment adopted by the banks are not stable. In many cases a small amount of dividend are paid without considering the risk free rate of return. Further the price of share on which the dividend is not paid on upward trend, this creates the problem to judge the true value of share in the market. Therefore, the clear policy on payments of DPS should be developed and dividend should be control and stable as to pay and judge properly (Findings: 6 & 7).
- Payment of dividend is neither static nor constantly growing. It is highly decreasing. Such way of paying dividend could not impress the market positively. So, these banks are advised to follow either static or constantly growing dividend payment policy. It would be better to fix and declare the amount of dividend in general meeting. This is not important only from the point of view of adequate return to shareholders but also to generate stable and increasing market value per share, long run survival of bank, efficient management and socially acceptable distribution of income (Findings: 8, 9 & 10).
- Banks should have long term visions regarding earning and dividend payment that helps to cope with challenging competitive situation of present world. Various integral and external factors should be considered before taking decision.
- Formulation of dividend policy will clearly guide the way on how to follow dividend distribution strategy. The policy should be determine whether the banks is going to adopt stable dividend policy, constant payout ratio or low regular plus extra dividends. When should be the long run dividend payout ratio, either it is pure residual policy, fixed dividend payout policy or smooth residual dividend policy should have been clearly explained by the dividend policy (Findings: 5).

• Further studies can be conducted by using others organization as sample, by using other sophisticated tools and techniques, by using other aspects as well.

### **BIBLIOGRAPHY**

### **Books**

- Bajracharya, B. C. (2001). *Business Statistics & Mathematics*. Kathmandu: M. K. Publishers & Distributors.
- Bhandari, D. R. (2056). *Principle and Practice of Banking and Insurance*. First Edition. Kathmandu: Asia Publication.
- Gupta, L. K. (2009). *Analysis of Financial Management*. New Delhi: Chaitanya Pubkishing House Pvt. Ltd.
- Hawkins, K. (1997). Fundamentals of Corporate Finance. New York: Mc-Graw Hill / Irwin.
- Khan, M. Y. and Jain, P.K. (1992). *Financial Management Text and Problems*. New Delhi: Tata Mc-Graw Hill Publishing Limited.
- Kothari, C. R. (1990). *Research Methodology, An Introduction*. New Delhi: Vikash publishing House Pvt. Ltd
- Kuchhal, S.C. (1961). *Financial Management*. Engle Wood Cliffs: Prentice Hall Inc.
- Manandar, K. D, dhakal, A. P, Thapa, K. and Pyakural, S. (2011). Fundamentals of Corporate Finance. Kathmandu: Khanal Publication Pvt. Ltd.
- Modiglian, H. & Miller, M. (1961). *The management of Business Finance*. New York: Von Nostrand Co.
- Pandey, I. M. (1999). *Financial Management*. 8<sup>th</sup> addition. India: Vikash Publishing House. Pvt. Ltd.
- Pradhan, R. S. (1994). *Financial Management Practices in Nepal.* Delhi: Vikas Publishing House Pvt.Ltd.
- Pradhan, S. (1992). *Basic of Financial Management*. first Edition. Kathmandu: Educational Enterprises Pvt. Ltd,
- Sapkota, B. (2007). *Financial Management Practices in Nepal*. Kathmandu: Buddha Academic publisher and Distributors Pvt. Ltd.

- Shah, S. (2009). *Basic of Financial Management*. Kathmandu: Educational Enterprise (P) Ltd.
- Sinkey, S. C. (1998). *Financial Management*. New Delhi: Chaitanya Pubkishing House Pvt. Ltd.
- Throp, J. (1997), *Financial Institutions and Capital Markets*. New York: Harper Collings College Publisher.
- Van Horne, J. C. (2000), *Financial Management and Policy*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Walter, J. (1996). *The management of Business Finance*. New York: Von. Nostrand Co. Ltd.
- Weston, J. F. and Copeland, T. E. (1992). *Managerial Finance*. New York: The Dryden Press.
- Wolf, H. K. and Pant P. R. (2005). *Social Science Research and Thesis Writing*. Kathmandu: Buddha Academic publisher and Distributors Pvt. Ltd.

#### **Studies & Articles**

- Charles, D. and Christopher, S. (2002). *Do Banks Provide Financial Slack*.

  Journal of Financial Management. London: Autumn Publisher, XIV, 78-84
- Friend, I and Puckett, M. (1964). *Relationship between Dividends and Stock Prices*. The American Economic Review, California: Cristal Publication, LIV, 656-682
- Modigliani, H. & miller, M. (1961). *Dividend Policy, Growth & Valuation of Shares*. Journal of Business Finance. New York: The Dryden Press, XXIV, 411-433
- Myron, J. G. (1962). *The Investment Financing and valuation of Corporation*. Journal of Finance. Homewood: Irium Publication, vol. III, 114-119.
- Ojha, M. S. (2000). Financial Performance and Common Stock Pricing. A Study of Nepalese Commercial Bank. Kathmandu: Asia Publication.

- Pradhan, R. S. (1992). A Study of Dividend Policies and Practices of Nepalese Enterprises. The Nepalese Management Review. New Delhi: Vikash Publishing House, IX, 23-43
- Timilsina, D. (2001). *Capital Market Development and Stock Price Behaviors in Nepal*. Journal of Management Dynamics. Kathmandu: Educational Enterprises Pvt. Ltd., VIII, 15-20.
- Van Horne, J. C. & John M. D. (1971). Dividend Policy and New Equity Financing. Journal of Finance. Volume New Delhi: Prentice Hall of India Pvt. Ltd., XXV, 507-519
- Walter, J. E. (1996). *Dividend policy: Its Influence on the Value of the Enterprise*. Journal of Finance. New York: VonNostrand Co. Ltd., XXX, 29-41

### **Unpublished Thesis**

- Gautam, R. J. (2011). *Dividend Policy in Commercial Banks*. Kathmandu: Shankar Dev Campus. T.U
- Budhathoki, B. R. (2012). *The Study of Dividend Policy of the Commercial Banksin Nepal*. Kathmandu: Shankar Dev Campus. T.U
- Shah, U. L. (2008). Cash Dividend Practice and its Impact on Share Price in Nepal. Kathmandu: Shankar Dev Campus. T.U
- Timsina, D. S. (2009). A Study on Dividend Policy and Its Impact on Stock

  Price of Selected Commercial Banks. Kathmandu: Shankar Dev

  Campus. T.U
- Dahal R. (2013). *Dividend and stock Price*. Kathmandu: Shankar Dev Campus. T.U

# Report

Bank of Kathmandu (2065-2069). Annual Reports. Kathmandu: BOK.

Everest Bank Limited (2065-2069). Annual Reports. Kathmandu: EBL.

Nepal Rastra Bank (2063). *Banking and Financial Institution Act.* Kathmandu: NRB.

Nepal Rastra Bank (2069). *Nepal Rastra Bank Directives*. Kathmandu: NRB.

### Websites

www.everestbankltd.com.np (Retrieve at 2013/12/09)

www.bok.com.np (Retrieve at 2013/12/12)

www.nrb.org.np (Retrieve at 2013/12/01)

www.sebon.com.np (Retrieve at 2014/01/01)

www.nepse.com.np (Retrieve at 2014/01/05)

www.wikipedia.org/wiki/dividend (Retrieve at 2013/01/02)

Appendix I

Calculations of Dividend Payout Ratio of Sample Banks

Year	DPS		E	CPS	DPR	
	BOK	EBL	вок	EBL	вок	EBL
2065/066	7.37	30	54.68	99.99	13.48	30.00
2066/067	15	30	43.08	100.16	34.82	29.95
2067/068	16.75	50	44.51	83.18	37.63	60.11
2068/069	21.32	0	37.88	88.55	56.28	0.00
2069/070	0.74	50	36.64	91.88	2.02	54.42
		Mean			28.85	34.90
		21.34	23.89			
C.V					73.98	68.46

Appendix II

Calculations of Dividend Yield Ratio of Sample Banks

Year	D	PS	MV	/PS	DY	
	BOK	EBL	вок	EBL	BOK	EBL
2065/066	7.37	30	1825	2455	0.40	1.22
2066/067	15	30	840	1630	1.79	1.84
2067/068	16.75	50	570	1094	2.94	4.57
2068/069	21.32	0	628	1033	3.39	0.00
2069/070	0.74	50	553	1591	0.13	3.14
		Mean			1.73	2.16
		1.46	1.76			
		84.40	81.77			

Appendix III

Calculations of Earning Yield Ratio of Sample Banks

Year	EPS		M	VPS	E	Z <b>Y</b>
_	BOK	EBL	BOK	EBL	ВОК	EBL
2065/066	54.68	99.99	1825	2455	3.00	4.07
2066/067	43.08	100.16	840	1630	5.13	6.14
2067/068	44.51	83.18	570	1094	7.81	7.60
2068/069	37.88	88.55	628	1033	6.03	8.57
2069/070	36.64	91.88	553	1591	6.63	5.77
1		Mean			5.72	6.43
S.D					1.81	1.73
C.V					31.59	26.96

Appendix IV

Calculations of Market Value per Share to Book Value per Share Ratio

Of Sample Banks

Year	BV	PS	M	VPS	Γ	ΟY
	BOK	EBL	BOK	EBL	вок	EBL
2065/066	100	100	1825	2455	18.25	24.55
2066/067	100	100	840	1630	8.4	16.3
2067/068	100	100	570	1094	5.7	10.94
2068/069	100	100	628	1033	6.28	10.33
2069/070	100	100	553	1591	5.53	15.91
		Mean			8.83	15.61
	S.D					5.70
		61.00	36.55			

Appendix V

Calculation for Mean Value, Standard Deviation, Coefficient of Variation

& Correlation between DPS & EPS of BOK

Year	DPS (X)	EPS (Y)	$X^2$	<i>Y</i> <sup>2</sup>	XY
2065/066	7.37	54.68	54.32	2989.90	402.99
2066/067	15.00	43.08	225.00	1855.89	646.20
2067/068	16.75	44.51	280.56	1981.14	745.54
2068/069	21.32	37.88	454.54	1434.89	807.60
2069/070	0.74	36.64	0.55	1342.49	27.11
N = 5	$\sum X = 61.18$	$\sum \mathbf{Y} = 216.79$	$\sum X^2$ =1014.97	$\sum Y^2$ =9604.31	$\sum XY$ =2629.45

Dividend per Share,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 12.24$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 8.16$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\overline{x}}$$
 = 66.69

Earnings per Share,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 43.36$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 7.15$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 16.50

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = -0.0993$$

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{n - 2} = 0.1712$$

Appendix VI

Calculation for Mean Value, Standard Deviation, Coefficient of Variation

& Correlation between DPS & EPS of EBL

Year	DPS (X)	EPS (Y)	<i>X</i> <sup>2</sup>	<i>Y</i> <sup>2</sup>	XY
2065/066	30.00	99.99	900.00	9998.00	2999.70
2066/067	30.00	100.16	900.00	10032.03	3004.80
2067/068	50.00	83.18	2500.00	6918.91	4159.00
2068/069	0.00	88.55	0.00	7841.10	0.00
2069/070	50.00	91.88	2500.00	8441.93	4594.00
N = 5	$\sum X = 160$	$\sum \mathbf{Y} = 463.76$	$\sum X^2 = 6800$	$\sum Y^2$ =43231.98	$\sum XY$ =14757.50

Dividend per Share,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 32$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 20.49$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\overline{X}}$$
 = 64.04

Earnings per Share,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 92.75$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 7.37$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 7.95

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = -0.1371$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} = 0.2227$$

Appendix VII

Calculation for Mean Value, Standard Deviation, Coefficient of Variation
& Correlation between DPR & PER of BOK

Year	DPR (X)	PER (Y)	<i>X</i> <sup>2</sup>	<i>Y</i> <sup>2</sup>	XY
2065/066	13.48	33.37	181.71	1113.56	449.83
2066/067	34.82	19.5	1212.43	380.25	678.99
2067/068	37.63	12.81	1416.02	164.10	482.04
2068/069	56.28	16.58	3167.44	274.90	933.12
2069/070	2.02	15.09	4.08	227.71	30.48
N = 5	$\sum \mathbf{X} = 144.23$	$\sum \mathbf{Y} = 97.35$	$\sum \mathbf{X}^2$ =5981.68	$\sum \mathbf{Y}^2$ =2160.51	$\sum XY$ =2574.46

Dividend payout Ratio,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 28.85$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 21.34$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\overline{x}}$$
 = 73.97

Price Earnings Ratio,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 19.47$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 8.14$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 41.81

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = -0.3363$$

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{n - 2} = 0.5521$$

Appendix VIII

Calculation for Mean Value, Standard Deviation, Coefficient of Variation
& Correlation between DPR & PER of EBL

Year	DPR (X)	PER (Y)	$X^2$	<i>Y</i> <sup>2</sup>	XY
2065/066	30.00	24.55	900.00	602.70	736.50
2066/067	29.95	16.27	897.00	264.71	487.29
2067/068	60.11	13.15	3613.21	172.92	790.45
2068/069	0.00	11.67	0.00	136.19	0.00
2069/070	54.42	17.32	2961.54	299.98	942.55
N = 5	$\sum \mathbf{X} = 174.48$	$\sum \mathbf{Y} = 82.96$	$\sum X^2$ =8371.75	$\sum \mathbf{Y}^2$ =1476.51	$\sum XY$ =2956.79

Dividend payout Ratio,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 34.90$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 23.89$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\overline{x}}$$
 = 68.46

Price Earnings Ratio,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 16.59$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 5$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 30.14

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = 0.1293$$

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{n - 2} = 0.2259$$

Appendix IX

Calculation for Mean Value, Standard Deviation, Coefficient of Variation

& Correlation between DPS & MVPS of BOK

Year	DPS (X)	MVPS (Y)	$X^2$	<i>Y</i> <sup>2</sup>	XY
2065/066	7.37	1825.00	54.32	3330625.00	13450.25
2066/067	15.00	840	225.00	705600.00	12600.00
2067/068	16.75	570.00	280.56	324900.00	9547.50
2068/069	21.32	628.00	454.54	394384.00	13388.96
2069/070	0.74	553.00	0.55	305809.00	409.22
N = 5	$\sum X = 61.18$	$\sum Y = 4416$	$\sum \mathbf{X}^2$ =1014.97	$\sum \mathbf{Y}^2 =$ 5061318.00	$\sum X Y = 49395.93$

Dividend per share,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 12.24$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 8.16$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\bar{x}}$$
 = 66.69

Market Value per Share,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 883.20$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 538.77$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 61.00

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = -0.2637$$

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{n - 2} = 0.4416$$

Appendix X

Calculation for Mean Value, Standard Deviation, Coefficient of Variation

& Correlation between DPS & MVPS of EBL

Year	DPS (X)	MVPS (Y)	<i>X</i> <sup>2</sup>	<i>Y</i> <sup>2</sup>	XY
2065/066	30.00	2455.00	900.00	6027025.00	73650.00
2066/067	30.00	1630	900.00	2656900.00	48900.00
2067/068	50.00	1094.00	2500.00	1196836.00	54700.00
2068/069	0.00	1033.00	0.00	1067089.00	0.00
2069/070	50.00	1591.00	2500.00	2531281.00	79550.00
<b>N</b> = 5	$\sum X = 160$	$\sum Y = 7803$	$\sum \mathbf{X}^2 = 6800$	$\sum \mathbf{Y}^2$ =13479131	$\sum XY$ =256800

Dividend per share,

Mean 
$$(\overline{X}) = \frac{\sum X}{N} = 32$$

Standard Deviation 
$$(\delta_X) = \sqrt{\frac{1}{n} \left[ \sum X^2 - \frac{(\sum X)^2}{n} \right]} = 20.49$$

Coefficient of Variation (CV) = 
$$\frac{\delta}{\overline{x}}$$
 = 64.04

Market Value per Share,

Mean 
$$(\overline{Y}) = \frac{\sum Y}{N} = 1560.60$$

Standard Deviation 
$$(\delta_Y) = \sqrt{\frac{1}{n} \left[ \sum Y^2 - \frac{(\sum Y)^2}{n} \right]} = 570.48$$

Coefficient of Variation (CV) =  $\frac{\delta}{\overline{Y}}$  = 36.55

Correlation 
$$(r_{xy}) = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \times n \sum Y^2 - (\sum Y)^2}} = 0.1519$$

$$t = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{n - 2} = 0.2662$$

Appendix XI

Calculation for Independent t-test of DPS

Year	DPS of BOK (X <sub>1</sub> )	DPS of EBL (X <sub>2</sub> )	$X_1$ - $\overline{X}_1$	$(X_1 - \overline{X}_1)^2$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)^2$
2065/066	7.37	30.00	-4.87	23.72	-2.00	4
2066/067	15.00	30.00	2.76	7.62	-2.00	4
2067/068	16.75	50.00	4.51	20.34	18.00	324
2068/069	21.32	0.00	9.08	82.45	-32.00	1024
2069/070	0.74	50.00	-11.50	132.25	18.00	324
Total	61.18	160.00		266.37		1680.00

For DPS of BOK,

Mean 
$$(\bar{\mathbf{X}}_1) = \frac{\sum X_1}{N_1} = 12.24$$

S.D (
$$\sigma$$
 or, $\mathbf{s}_1$ ) =  $\sqrt{\frac{\sum (\mathbf{X}_1 - \overline{\mathbf{X}}_1)^2}{n-1}}$  = 8.16

For DPS of EBL,

Mean 
$$(\overline{\mathbf{X}}_2) = \frac{\sum X_2}{N_2} = 32$$

S.D (
$$\boldsymbol{\sigma}$$
 or, $\boldsymbol{s}_2$ ) =  $\sqrt{\frac{\sum (\mathbf{X}_2 - \overline{\mathbf{X}}_2)^2}{n-1}} = 20.49$ 

For Independent t-test,

Test statistic under H<sub>0</sub>,

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}} = \frac{(12.24 - 32)}{\sqrt{304.02(\frac{1}{5} + \frac{1}{5})}} = 1.7919$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}$$

$$=\frac{5\times8.16^2+5\times20.49^2}{5+5-2}$$

$$= 304.02$$

Appendix XII

Calculation for Independent t-test of EPS

Year	EPS of BOK (X <sub>1</sub> )	EPS of EBL (X <sub>2</sub> )	$X_1$ - $\overline{X}_1$	$(X_1 - \overline{X}_1)^2$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)^2$
2065/066	54.68	99.99	11.32	128.14	7.24	52.4176
2066/067	43.08	100.16	-0.28	0.08	7.41	54.9081
2067/068	44.51	83.18	1.15	1.32	-9.57	91.5849
2068/069	37.88	88.55	-5.48	30.03	-4.20	17.64
2069/070	36.64	91.88	-6.72	45.16	-0.87	0.7569
Total	216.79	463.76	-	204.73	-	217.31

For DPS of BOK,

Mean 
$$(\bar{\mathbf{X}}_1) = \frac{\sum X_1}{N_1} = 43.36$$

S.D 
$$(\sigma \text{ or,} \mathbf{s}_1) = \sqrt{\frac{\sum (\mathbf{X}_1 - \overline{\mathbf{X}}_1)^2}{n-1}} = 7.15$$

For DPS of EBL,

Mean 
$$(\bar{\mathbf{X}}_2) = \frac{\sum X_2}{N_2} = 92.75$$

S.D (
$$\sigma$$
 or, $\mathbf{s}_2$ ) =  $\sqrt{\frac{\sum (\mathbf{X}_2 - \overline{\mathbf{X}}_2)^2}{n-1}} = 7.37$ 

For Independent t-test,

Test statistic under H<sub>0</sub>,

$$t = \frac{(\overline{X}_1 - \overline{X}_2)}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}} = \frac{(43.36 - 92.75)}{\sqrt{65.98(\frac{1}{5} + \frac{1}{5})}} = 9.6198$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}$$

$$=\frac{5\times7.15^2+5\times7.37^2}{5+5-2}$$

Appendix XIII

Calculation for Independent t-test of MVPS

Year	EPS of BOK (X <sub>1</sub> )	EPS of EBL (X <sub>2</sub> )	$X_1$ - $\overline{\overline{X}}_1$	$(X_1 - \overline{X}_1)^2$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)$	$(\mathbf{X_2} - \overline{\mathbf{X}}_2)^2$
2065/066	1825.00	2455.00	941.80	886987.24	894.40	799951.36
2066/067	840.00	1630.00	-43.20	1866.24	69.40	4816.36
2067/068	570.00	1094.00	-313.20	98094.24	-466.60	217715.56
2068/069	628.00	1033.00	-255.20	65127.04	-527.60	278361.76
2069/070	553.00	1591.00	-330.20	109032.04	30.40	924.16
Total	4416.00	7803.00		1161106.80		1301769.20

For DPS of BOK,

Mean 
$$(\overline{X}_1) = \frac{\sum X_1}{N_1} = 883.20$$

S.D 
$$(\sigma \text{ or,} \mathbf{s}_1) = \sqrt{\frac{\sum (\mathbf{X}_1 - \overline{\mathbf{X}}_1)^2}{n-1}} = 538.77$$

For DPS of EBL,

Mean (
$$\bar{\mathbf{X}}_2$$
) =  $\frac{\sum X_2}{N_2}$  = 1560.60

S.D 
$$(\sigma \text{ or,} \mathbf{s}_2) = \sqrt{\frac{\sum (\mathbf{X}_2 - \overline{\mathbf{X}}_2)^2}{n-1}} = 570.48$$

For Independent t-test,

Test statistic under H<sub>0</sub>,

$$t = \frac{(\overline{X}_1 - \overline{X}_2)}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}} = \frac{(883.20 - 1560.60)}{\sqrt{384825.34(\frac{1}{5} + \frac{1}{5})}} = 1.7266$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}$$

$$=\frac{5\times538.77^2+5\times570.48^2}{5+5-2}$$

$$=384825.34$$