## CHAPTER-I

## INTRODUCTION

### 1.1 Background of the study

Finance, the art and science of managing money, affects the lives of every person and every organization. Finance is concerned with the process, institutions, markets and process involved in the transfer of money among and between individuals, business, and governments.

Managerial finance is concerned with the duties of the financial manager in the business firm. Managerial finance is important in all types of business including banks and other financial institutions. The key functions are the investment, financing, dividend and liquidity of an organization.

In modern period, many investors invest their money to have expected return. To fulfill the return objectives, firms should distribute the earnings to the investors. Earning is that amount which remains after deducting all operational and nonoperational expenses from revenue. Capital market provides investors revenues incomes in term of dividends and capital incomes in terms of stock prices appreciation.

Dividend policy is a part of the firm's financing decision. A firm's dividend policy has the effect of dividing its net earnings into retained earnings and dividends. The retained earning provide fund to finance the firm's long term growth. Dividends are paid in cash. Thus, the distribution of earnings uses the available cash of the firm. Dividend policy of the firm, thus, has its effect on both the long term financing and wealth of shareholders. (Kothari, 1990)

The dividend policy involves the decisions to pay out earning versus retaining them for reinvestment in the firm. Firms may differ as per their dividend policies. In the secondary market the declaration of the dividend or the dividend policy of the firm changes the market price of the shares. Therefore it is expected that there
is some impact of dividend policy over the market price of the stock. The declaration of dividend by companies carries a message to the investors regarding their demand for shares. (Pandey, 1999)

Any change in dividend policy has both favorable and unfavorable effects on the firm's stock price. Higher dividends mean higher immediate cash flows to investors, which is good or vice versa. The dividend policy should be optimal which balances the opposing forces and maximizes stock prices. Dividend policy is regarded as a tool to determine the appropriate allocation of profits between dividend payments and amount to be retained in the firm. Profit that distributes to the shareholder from their investment is called dividend. Retained earnings are the most important internal resources of financing for the growth of the firm. Dividend policy is a tool to solve problems, which creates the profit of the company. It gives the solution regarding how much of the profit should be distributed and how much to be retained. (Kulkarni, 1985)

In case of financial institutions, we have to know the effectiveness of dividend policy, which is more effective. Here present study will highlight the comprehensive dividend policy of the firms. There are various types of financial institutions that are Commercial banks, Development banks, Finance companies, Insurance companies etc. and these institutions make dividend, the studies is basically focused on their dividend policy and how it is affecting the value of their stock in the market.

Now an introduction of the companies and banks which are selected for the study is relevant here to put forth.

## 1. Himalayan Bank Limited (HBL)

Himalayan Bank Limited was established in 1992 by the distinguished business personalities of Nepal in partnership with employee's provident fund and Habib Bank Limited, one of the commercial bank of Pakistan.

Its main objective is to provide banking facilities to people such as collecting deposits, provide long term and short term loan against collateral and guarantee, consortium financing, inter and intra- banking transaction. It is the first commercial banks of Nepal with maximum share holding by the Nepalese private sector. Besides, commercial activities, the Bank also offers industrial and merchant banking. The bank has one of the best core banking software in the world. It is the availability of this high-end software that has equipped the bank it provides highquality real-time services for its customers. The bank has leveraged its technological investments by providing modern banking services such as SMS banking and internet banking for its customers. Similarly, the bank possesses a wide network of 40 ATMs spread across the country.

The bank`s consistent growth over the last 17 years has been possible through its strategic approach, quality manpower, investments in technology and constantlyevolving products and services.

## 2. Nabil Bank Limited (NABIL)

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, nabil provides a full range of commercial banking services through its 47 points of representation across the kingdom and over 170 reputed correspondent banks across the globe.

Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking
history of Nepal as it started an era of modern banking with customer measured as a focal objective while doing business.

Operation of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world- renowned software Infosys Technologies System, Bangalore, India, Internet banking system and telebanking system.

## Dividend Policy \& Market Price of Stock (MPS)

Dividend in the simple term is the part of earnings, which is announced to distribute among the stockholders. In one way it is the cost of sacrificing fund in investment. A company pays whole earning as dividend or retains some and pays less. In practice, a company pays whole earnings as dividend at the beginning years to create better image and existence in the financial market but later they change their policy and announce a certain percentage of earnings as dividends (e.g. Citizen Investment Trust, Everest Bank has practiced in the past). The decision to keep some portion of earnings or pay some portion of earnings as dividend is known as dividend policy.

In the Nepalese context, dividend policy in different firms seems different. Theoretical and practical deviation has proved, everything as written is not practiced and everything practiced is not of actual theory. Therefore dividend policy is the practice, strategy or decision made by a firm as per their environment to establish market reputation as well as to meet general expectations of the shareholders.

Dividend policy is an important decision of financial management because it affects the financial structure, the flow of funds, corporate liquidity etc. It determines the amount of earning to be distributed to shareholders and the amount to be retained in the firm. Dividend may be paid in cash, stock or merchandise. Cash dividend is the most common; merchandise dividends are the least common. Stockholders are not promised a dividend, but he/she grows to expect certain
payment on historical dividend pattern of the firm. Before dividends are paid to common stockholders the claims of creditors, the government and preferred stockholders must be satisfied is the theory but in Nepalese company cash dividend is most popular and stock dividend is the new practice.

Market price of the stock (MPS) is the trading price of the stock listed in authorized or legal stock exchanges. In context of Nepal, MPS is the price that is coated for purchasing or selling under Nepal Stock Exchange Act or related laws and regulations, on the stock exchange floor. MPS is that value of stock, which can be obtained by a firm from the market. Market value of a share is one of the variables, which is affected by the dividend per share and earnings per share of the firm. If the earning per share and dividend per share is high, the market value per share will also be high. Market values of the share may be high or low than the book values. If the firm is growing concern and it's earning power is greater than cost of capital, the market value of the share will be higher than the book value. If the firm's earning capacity is lower than cost of capital, MPS will also be lower. MPS is determined by capital market. (Pandey, 1999)

MPS usually fluctuates by the adequate information. No one can earn more in the inefficiency and inefficiency is legally prohibited in order to regulate the security market in every nation. But being focused in this study, dividend policy and its impact on market price of stock, there should be discussed different models and practices which have significant effects in MPS or not. So MPS and security valuation are integral parts in it. Without valuation no one can coat the price and without price there is no chance of trading. (Gitman, 1994)

Dividend policy and MPS has correlation, if the company pays high dividend the MPS increases and vice-versa.

### 1.2 Focus of the study

The main focus of the study is to examine the practice made by the Nepalese firm in regards to the dividend policy. But for whole these purpose different other studies are going to be done i.e. comparison of earning per share (EPS), dividend per share (DPS), market price per share (MPS) and others as per the requirement with respect to the sample firm. The study will be more focusing on the dividend policy and MPS; however other qualitative discussion will be submitted including the Nepalese practices. The relationship between different variables will be individually and combine analyzed in order to state the particular suggestion. In the same way, the study will focus in regards to dividend practices made in past five years by the sampled firms.

### 1.3 Statement of the problem

Finance companies are different from other types of limited companies in many aspects. Hence, the results of such analytical study in the case of finance companies may differ from that of others.

Dividend policy has always been a controversial part of managerial finance. From the past many years it has been tried to see the relevant and practicable dividend policy in the firms all over the world. In context of Nepal, firms have followed different dividend policies but of course, with an adhoc trend as per the environment. That is the reason; it can be said that dividend policy is not matching with the earnings made by the firms. But at the same time, it is the truth that many scholars have not been able to define simple and conclusive relationship between dividend policy and market price of the stock. Some experts believe to have positive relationship but some others believe no relation at all.

The capital market of Nepal is just in way of development stage, yet investors are investing in new companies without having the perspective analysis of the companies. Stock price increases with announcement of dividend although the firm announcing may be undercapitalized. (Bhandari, 2056)

The main focus of this study is to deal with the following problems so far it will be possible to cope with:

1. What is the impact of dividend policy on the market price of the stock?
2. Is there any relationship of dividend with earning per share, market price per share in case of sampled banks?
3. Is there any uniformity between the commercial banks in regards to dividend policies?
4. What are the reasons behind stock price increasing after the announcement of dividend?

### 1.4 Objective of the study

The basic objective of this research is to examine the impact of dividend policy on the market price of the stock in commercial banks. The major objectives of the study are as follows:

1. To find out the impact of dividend policy on the market price of the stock.
2. To know the relationship of dividend with earning per share, market price per share in case of sampled banks.
3. To analyze if there is any consistency among DPS, EPS, MPS and DPR in the sample bank.

### 1.5 Significance of the study

Nowadays, a large number of people are attracted to invest in shares with an attention of getting greater returns. Dividend policy has become an effective way to attract such investors. So, this study of dividend policy has significant use for the financial companies.

As dividend is one of the crucial factors in every organization and dividend policy decision is one of the most important decisions, this might serve to be important information for the financial institutions. Especially the significance of this study can be summarized in the following points: (Pradhan, 1994)

1. The study will be helpful to the management and policy makers in setting and following a dividend policy.
2. The dividend policy of the financial institutions plays a vital role to develop capital market in the nation.
3. To raise public awareness about the relationship between the dividend policy and market price of share in order to help them to behave rationally while making their investment decisions.
4. Finally, it will support the future researcher by providing important findings and valuable information too.

### 1.6 Limitations of the study

There will be some limitations while making analysis. Basically shortage of time, reliability of statistical tool used and lack of research experience are the main limitations. Some other limitations are as follows:

1. In order to interpret results only secondary data will be analyzed. So the outcome largely depends on the reliability of the secondary data.
2. The study period covers data for only six years.
3. Among the different aspects of dividend policy only the market price of the stock has been selected and only cash dividend is taken for the analysis.
4. Due to annual distribution system in Nepal, dividend has not been considered for calculation for holding yearly periodic return.

### 1.8 Plan of the study

The study has been organized into following chapters:

## Chapter-I: Introduction

Chapter one deals with the general background of the study with the subject matter of the study. This chapter consists of the statement of the problem, focus of the
study, objectives of the study, needs and importance of the study and limitation of the study.

## Chapter-II: Review of Literature

Second chapter deals with review of literature. It includes review of books and review of previous thesis and a brief profile and introduction of commercial banks.

## Chapter-III: Research Methodology

Chapter three deals with research methodology adopted to achieve the objectives of the study research questions, the models specification of the variables, data collection.

## Chapter-IV: Presentation and Analysis of Data

Chapter four is the heart of the study. This chapter deals with presentation and analysis of relevant data and information through a definite course of research methodology and drawing major findings.

## Chapter-V: Summary, Conclusion and Recommendations

It has covered the summary, conclusion and suitable recommendations.

At last, an appendix has been included according to the test of relationship between various variables of dividend policy and a bibliography.

## CHAPTER-II

## REVIEW OF LITERATURE

Review of literature is basically a stock taking of available literature in one's field of research. The literature survey thus provides the students with the knowledge of the status of their field of research. Thus, previous studies cannot be ignored as they provide the foundation of the present study. This chapter highlights the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles and review of thesis work performed previously.

Therefore, this chapter has been divided into the following parts.

## 2. 1 Conceptual framework

In this chapter, the researcher aims to shed light on the relevant theoretical background of the study being under taken. It comprises the conceptual framework about the Himalayan Bank Limited (HBL) and NABIL Bank, its activities, dividend Policy concepts, dividend policy management, dividend payment, and financing policies etc and review of books, previous study. So far, this study is concerned with reviewing the dividend Polices of both Banks. In this connection, the researcher has reviewed various literatures in the form of books, newspapers, journals and articles, browsing materials from the concerned websites, previous dissertations in the relevant subject matters etc.

### 2.1.1 Meaning Dividend Policy

A firm's dividend policy has the effect of dividing its net earnings into two parts: retained earnings and dividends. The retained earnings provide funds to finance the firm's long-term growth. Dividends are generally paid in cash. A firm which intends to pay dividends and also needs funds to finance its investment opportunities will have to use external sources of financing, such as the issue of debt or new common shares. Dividend policy of the firm, thus, affects both the
long-term financing and the wealth of shareholders. As a result, the firm's decision to pay dividends may be shaped by two possible viewpoints: as a long-term financing decision \& as a wealth maximization decisions. If the firm increases the retained earnings, shareholder's dividend decreases \& the market price of the share increases. Thus, the dividend decision is always a matter of dispute regarding the dividend policy different theories \& research has been advanced.

Dividend policy determines the division of earnings between payments to stockholders and reinvestment in the firm. Retained earnings are one of the most significant resources of funds for financing corporate growth, but dividends constitute the cash flows that accrue to stockholders. (Hasting, 1996)

Dividend policy refers to the issue of how much of the total profit a firm should pay to its stockholders \& how much to retain for investment so that the combined present and future benefits maximize the wealth of stockholders. The dividend policy, however, not only specifies the amount of dividend, but also form of dividend, payment procedure etc. a company's dividend policy can be used as a signal by investors on management's view of the company's future prospects. Companies are generally severely punished in the market place for dividend decreases. Therefore, dividend increases usually occur only when management is confident of the earnings \& cash flow prospects of the company.

In general, dividend policy is concerned with the following matters:

1. Amount of dividend to be paid- the policy outlines the basis to determine the amount of dividend to be paid.
2. Form of dividend- cash dividend or stock dividend.
3. Payment procedure.
4. Stock repurchases and stock splits.

### 2.1.2 Form of dividend

## 1. Cash dividend

Cash dividend is the dividend, which is distributed to the shareholders in cash out of the earnings of the company. When cash dividend is distributed both total assets and net worth of the company decrease as cash and earnings decrease. The market price of the shares drops in most cases by the amount of cash dividend distributed. It may be termed as portion of earning paid in cash to the owner of the firm as return on their equity investment. If company doesn't have enough cash at the time of dividend payment, company seeks to arrange funds, which will be managed by borrowing. "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. (Kuchhal, 1974)

The cash account and the reserve account of the company will be reduced when cash dividend is paid. Thus, both the total assets and the net worth of the company are reduced when the cash dividend is distributed. The market price of share drops in most cases by the amount of the cash dividend distributed.

## 2. Stock dividend

A stock dividend occurs when the board of directors authorizes a distribution of common stock to existing shareholders. In other words, if additional shares are issued to existing shareholders instead of cash dividend is known as stock dividend. Stock dividend increases the number of outstanding shares of the firm's stock. Although stock dividends do not have a real value, firms pay stock dividend as a replacement for a supplement to cash dividend. Under stock dividend, stock holders receive additional shares of the company in lieu of cash dividends. When stockholder receive stock dividend, the number of shares increases but as it is paid to existing shareholders on their proportion of their share holding. It doesn't affect the ownership of the company. Stock dividend increases number of shares as a result EPS, DPS and market price of share of the company decreases. (Khan \& Jain, 1994)

Practically, if the stock dividend is issued, the par value of the share remains constant. In case of stock split, the par value of the share does not remain constant, therefore the common stock, paid-in-capital \& retain earnings account also remain same. In the accounting treatment the stock dividend \& stock split are very similar. A stock split however is usually reversed for occasion when a company wishes to achieve a substantial reduction in the market price of the shares. In any case; the concern of the management is the positive effect on the stock price. (Pradhan 1992)

An analysis of all the benefits and cost of stock dividends depicts the net effect on the value of stock, and provides a basis to issue or not to issue stock dividend. In stock split there is no change in the capital account instead of a large numbers of the shares of the common stock is issued. In two-for-one stock split, stockholders receive two shares for each one previously held. The book value per share is cut in a half and par or stated, value per share is similarly changed. (Sayers, 1987)

Practically accepted behavior of the stock dividend and split holds some differences. The New York stock Exchange considers any distribution of the stock totaling less than $25 \%$ of outstanding stock to be a stock dividend \& any distribution of $25 \%$ or more a stock split. A stock split will have the following effects:

1. A stock split increases the number of outstanding stocks,
2. It decrease in the par value and the market price of the stock,
3. It does not change the proportional ownership of the stockholders,
4. It does not change the capital account nor the net worth of the company,
5. Unless the total earning is increased, the stock split causes a dilution of EPS.

In practice, it is observed that the immediately after the announcement of bonus issue, the market price of the company changes depending on the investors'
expectations. Sometimes a sharp decline in the share price may be observed if the bonus issue falls short of the investors' expectations.

It may be emphasized that the market value of share may improve as the result of bonus issue if it is followed by increased dividends in the immediate future. If the dividends do not increase, it is likely that the market price may fall. ${ }^{\text {ii }}$

### 2.1.3 Dividend Theories

Management should try to maintain regular dividend. For regular dividend, the firm will have sufficient earnings, whether those earnings were generated in current period or in previous periods. Dividend is the periodic payment made to stockholders to compensate them for their wealth and investment funds. Dividends may be in the form of cash, stock or property. The board of directors must declare all dividends. Generally, corporation can only declare dividends out of earnings, although some states laws \& corporate agreements permit to declaration of dividends from sources other than earnings.

Dividend is a portion of earning which is distributed to shareholders in return of their investment in share capital, conceptually speaking the difference between dividend and dividend policy is only of degree but not of the kind itself.

Most of the investors expect dividend to continue in each year as well as to receive price when they sell the stock. The expected final stock prices include the returns of the original investment plus a capital gain. If the stock is actually sold at price above its purchase price, the investor will receive a capital gain as such the shareholders expect an increase in market value of the common stock overtime. At the same time, they also expect firm's earnings in a form of dividend. So the shareholders may satisfy with dividend or capital gain. "Financial manager is therefore concerned with the activities of corporation that affect the well being of stockholders. That well being can be partially measured by dividend received but a more accurate measure is the market value of stock." (Van Horne, 2000)

But shareholders usually think the dividend yield less risky than capital gain. "Since dividend would be more effective to stockholder. One might think that there would be a tendency for corporation to increase distribution of dividend. But one might equally pressure that gross dividend would be reduced somewhat with an increase in net profit after tax dividend still available to shareholders and increase in retained earnings for the corporation." (Manandar, Thapa \& Pyakural 2011)

There are two fundamental theories regarding to dividend:

1. Residual theory
2. Wealth maximization theory

## 1. Residual theory of dividend

Under this theory, the payment of dividend depends on its investment policy. "One school of thought, the residual theory of dividends suggests that the dividend paid by a firm should be viewed as a residual amount left after all acceptable investment opportunities have been undertaken." In this theory the shareholders get dividends only when there exists a balance of earning after paying fixed obligations \& investing in profitable sector or expansion.
"The starting point in the theory is that investors prefers to have the firm retain and reinvest earnings exceeds the rate of return the investor can obtain on other investments of comparable risk." It assumes that the internally generated funds are comparatively cheaper than the funds obtained from external sources. It is because the retained earnings or an internally generated fund does not imply any flotation cost as in the external sources by issuing new shares. If the firm has retained earning left over after financing all acceptable investment opportunities, these earnings than will be distributed to stockholders in the form of cash dividends. If not there will be no dividends. (Weston \& Copeland 1992)

At last it can be concluded that dividend policy is affected by the company's investment opportunities \& the availability of internally generated funds where
dividends are paid only after all acceptable investment have been financed. So, according to this theory dividend policy is totally passive in nature.

## 2. Wealth maximization theory

Wealth is defined as the net present worth or value of the firm. Under wealth maximization theory, larger dividends is announced and distributed to shareholders in order to (or in hope with) maximize the wealth of the stockholders. Basically, it is applicable for those companies, which are just established and to those companies it will be beneficial whose financial profits are in decreasing trends. The main purpose of the wealth maximization theory of dividend is to make assurance to the stockholders that there are interesting in the firm, which has not better market.
"Stockholders wealth maximization is the appropriate goal for management decisions; considers the risk and timing associated with expected earnings per share in order to maximize the price of the firm's common stock." (Weston and Bringham 1995)

Keeping these theories into considerations, dividend can be paid in different forms. Among them some are discuss below:

### 2.1.4 Factors affecting dividend policy

## 1. Legal requirements

Legal rules specify those conditions under which dividend must not be paid.
> Capital impairment rules

The firm cannot pay dividend out of its paid up capital. If it does so there would be a reduction in the capitals where adversely purpose of this law is to protect creditors of a corporation.
$>$ Insolvency rule

This rules states that cash dividend should be prohibited, if the company is insolvent. Insolvency in the legal services defined as the situation when the recorded value of liabilities exceeds the recorded value of assets. Similarly in the technical sense, it is the firm's inability to pay its current debtor. The main objective of this rule is to restrict the company from far country shareholders to the determent of creditors when cash is limited.
> Undue retention of earnings rule

Undue retention of earning mean significantly in excess of the present \& future investment need of the company. A firm may deliberately retain a large portion of its earning in over to defer income tax payments. The purpose of the law is to prevent companies from retaining earnings for their sake of avoiding taxes \& enforce them to pay dividend. It is because shareholders are required to pay taxes on dividend received but they are not taxed on the capital gains unless the shares are actually sold. In addition the rate of capital gains is lower than that of income tax.

## Net profits rule

It state that dividend must be paid from present or past retained earnings. A firm cannot pay cash dividend greater than due amount of current profits plus the accumulated balance of retained earnings.

## 2. Liquidity position/ Solvency position

Company dividend policy will have important - amplifications on its liquidity position. Because dividend represent a cash overflow, the greater the cash position \& overall liquidity a company the greater its ability to pay dividend. If a company pays out as dividend most of what earns, then for business requirement it has to depend upon outside resources. A growing \& profitable company may not be liquid since its funds may got into fixed assets \& permanent working capital. Similarly solvency position of the company is also affected by the dividend policy. A continuous retention of earning reduces the need for outside funds $\&$ the risk of
insolvency, but in the other hand retained earnings would steadily increase the cost of capital of the firm when all the borrowed funds are being replaced by internally generated funds, the cost of capital of the funds would be the cost of equity.

## 3. Ability to borrow (Access to capital market)

Though a company is not sufficiently liquid, but it can borrow the funds at the time of need (better financial flexibility), such firms can pay high dividend to its investors. A well-established, reputed and profitable firm has easy accessibility to the management in paying dividend.

## 4. Repayment of debt

Firm may have the policy to extinguish its past debts by means of retained earnings. If such alternatives are being adopted then such firm will retain more \& pays less as dividend.

## 5. Restrictions in debt contracts

The firm of raising long-term debt there may be provisions of debt agreements, which may prevent the payment of dividend entirely, or to a certain limit until certain conditions are fulfilled. Due to such sort of restrictions has made the management's freedom to decide about dividend payments limited.

## 6. Age of firm

A new young growing concern requires large amount of funds to finance its growth requirements. Therefore the management must follow consecutive dividend policy to plough larger earnings. But an old \& established company having reached saturation point may follow high dividend payout policy.

## 7. Growth rate of firm

A rapidly growing concern will have constant needs of long-term funds to seize favorable opportunities for which it has to retain more \& pays less as dividend.

## 8. Clientele

Different dividend policies attract different types of investors or different clienteles. High \& stable pay offs attract investors specially pensioners \& other who prefer a large economically weaker persons proportion of their total return in current income. On the other hand, wealthy individuals \& employed persons in top salary income brackets may not benefit by current dividend incomes received, due to the differential in tax rates on capital gains \& dividend.

## 9. Control

Dividend policy may also be strongly influenced by shareholder or management control objectives. If the company pays substantial dividend, it may need to raise capital through the issue of common stock, by which the controlling interest of the company may be diluted. In order to hold control the company may prefer a low dividend payoff. (Wolf \& Pant)

## 10. Internal investment opportunity

When the firm has opportunities to earn returns greater the available to shareholders outside, the firm retention \& reinvestment is appropriate.

### 2.1.5 Review of International related studies

As we mentioned earlier, there have been made so many studies made by the different persons and institutions for dividend policy and stock price. There are two opinions regarding to dividend payout and market price/ value of shares. One point of views is that dividends are irrelevant and the amount of dividend payout does not affect the market value of the share. The other is dividends are relevant \& the amount of dividend paid affect the market price/ value of the shares.

Always a critical \& confused question has arose, whether dividend policy affect the market value of the shares or not. To put light in these matter different studies made by different international scholars and researcher should be overviewed. Therefore some of the main researches are going to be discussed below:

## 1. Walter's study

James E Walter has proposed a model for share valuation. According to him, the dividend policy of the firm affects the value of the shares. His model supports that dividends are relevant. He argues that the choice of dividend policies almost always affect the value of an enterprise. The investment policy of a firm cannot be separated from its dividend policy; according to him both are interlinked which is just opposite to Modigliani and Miller approach.

Walter's model shows clearly the importance of the relationship between the return of a firm's investment or its internal rate of return (r) and its cost of capital or the required rate of return $(\mathrm{k})$ in determining the dividend policy. As long as the internal rate greater than the cost of capital, the share price will be enhanced by retention \& will vary inversely with dividend payout. In this way Walter's model is also known as "optimal theory of dividend." The basic assumptions of the Walter's model are as follows:
A. The firm finances all investment through retained earnings. External sources if funds like debt or new equity capitals are not used.
B. Firm's internal rate of return (r) and cost of capital (k) are constant.
C. All earnings are either distributed as dividend or reinvested internally.
D. There is no change in values of earnings per share (EPS) and dividend per share (DPS). The value of EPS and DPS remain constant, although there may be changed in the model for determining the result.
E. The firm has a perpetual or infinite life.

Based on above assumptions, formula determining to find the market price per share is as follows,

$$
\mathrm{P}=\frac{\mathrm{Div}}{\mathrm{k}}+\frac{\mathrm{r}(\mathrm{EPS}-\text { Div }) / \mathrm{k}}{\mathrm{k}}
$$



Where,

P = Market price per share
Div = Dividend per share

EPS = Earnings per share
r = Firm's internal rate of return
$\mathrm{k} \quad=$ Firm's cost of capital or capitalization rate.

Walter's model shows that there are three probable conditions of the firm for comparing the relationship between r and k .
a. $\quad \mathrm{r}>\mathrm{k}$ (Growth firm)

If the internal rate of return is greater than cost of capital, it is better to retain retained earnings. These firms are able to reinvest earnings as a rate (r), which is higher than the rate expected by shareholders (k). They will be maximizing the value per share if they follow a policy of retaining all earnings for internal investment. The market value per share increases by decreasing the dividend in such a condition. The market value per share will be maximum at zero dividends.
b. $\mathrm{r}=\mathrm{k}$ (Normal firm)

If the internal rate of return is equal to cost of capital, the dividend payout does not affect the value of share. Such an enterprise can be called as a Normal firm. Whether the earnings are retained or distributed, it is a matter of indifference for a normal firm. The market price of share will remain constant for all dividend payout ratios from zero to 100 . There is no optimum dividend policy for such firm. The market value per share is not affected by the payout ratio when $\mathrm{r}=\mathrm{k}$.
c. $\mathrm{r}<\mathrm{k}($ Declining firm $)$

If the internal rate of return (r) is less than cost of capital (k), it indicates that the shareholders can earn a higher return by investing elsewhere. In such case for maximizing the value of shares dividend also should be maximized. By distributing the entire earning as dividend, the value of the shares will be at optimum value. The dividend payout ratio would give on optimum dividend policy. The market value per share increases as payout ratio increases as payout ratio increases when $\mathrm{r}<\mathrm{k}$.

## 2. Gordon's study

Myron Gordon develops one very popular model explicitly relating the market value of the firm to dividend policy. It is model of stock valuation using the dividend capitalization approach. This model assumes that dividend per share determine the value of shares. So according to him the dividend policy of a firm affects its value even when the return on investment is equal to the capitalization rate $(\mathrm{r}=\mathrm{k})$. This argument suggest that an increase in dividend payout ratio leads to increase in the stock prices for the reason that investors consider the dividend yield less risky than the expected capital gain. What is available at present is preferable than what may be available in future. That is to say current dividends are considered certain and risk less. The future is uncertain. The investors would naturally like to avoid uncertainty. So the current dividends are given more weight than expected future dividend by the investors. So the value per share increases if dividend payout ratio in increasing. Gordon's model is known as Growth model.

Gordon's model is based on the following assumptions:
A. The firm is an all equity firm, and it has no debt.
B. The only source of financing new investment is retained earnings. No external financing is available.
C. The internal rate of return (r) and the cost of capital (k) for the firm remain constant.
D. The firm and its stream of earnings are perpetual.
E. Corporate taxes do not exist.
F. The retention ratio, (b) once decide upon, is constant. Thus, the growth rate $\mathrm{g}=\mathrm{b} \mathrm{r}$, is constant.
G. The cost of capital of the firm is greater than the growth rate (g) of the firm $(\mathrm{k}>\mathrm{g})$ to get meaningful value.

Based on above assumptions the formula for finding out the market value per share, proposed by Gordon is given below:

$$
P=\frac{E(1-b)}{k-b r}
$$

Where,
P =Price per share
E =Earnings per share
b =Retention ratio or percentage of earnings retained.
(1-b) =Dividend payout ratio i.e. Percentage of earnings distributed as dividends.

K $=$ Cost of capital or capitalization rate
br =Growth rate
a. $\mathrm{r}>\mathrm{k}$ (Growth firm)

In growth firm the share price tends to decline is correspondence with increase in payout ratio or decrease in retention ratio i.e. high dividends corresponding to earnings leads to decrease in share price are negatively co-related in case of growth firm.
b. $\mathrm{r}=\mathrm{k}$ (Normal firm)

The share value remains constant regardless of changes in dividend policies in the case of normal firms.

$$
\text { c. } \mathrm{r}=\mathrm{k}(\text { Declining firm })
$$

The share prices tend to rise with the rise in dividend payout ratio. It means dividend \& stock prices are positively co-related in a declining firm.

## 3. Modigliani and Miller's study

It has been argued that dividend policy has no effect either on the price of a firm's stock or its cost of capital, that is, dividend policy is irrelevance. This theory was first introduced by Franco Modigliani and Merton Miller in 1961 and popularly known as $\mathrm{M}-\mathrm{M}$ approach. Through an article "dividend policy, growth and valuation of shares" they advocated that dividend policy does not affect the value of the firm i.e. dividend policy has no effect on the share price of the firm. The M$M$ approach focuses the irrelevant effect of dividend policy in the firm valuation arguing that, the value of the firm is determined only by its basic earnings power and its business risk, thus, the value of the firm depends on the income from it assets and not on how this income is split between dividend \& retain earnings.

M-M approach is based on the following assumptions:
A. Perfect capital market in which all investors are rational. Information available to all at no cost, instantaneous transaction without costs, infinitely divisible securities and no investor large enough to affect the market price of the security,
B. An absence of floatation costs on securities issued by the firms,
C. A world of no taxes,
D. A given investment policy for the firm, no subject to change,
E. Perfect certainty by every investor as to future investment and profits of the firm (but M-M dropped this assumption later).

M-M had tried to prove their theory by different models of those some are explained below

Market value/ Price of share

The market value of share at the beginning of the period is equal to the present value of dividend paid at the end of the period plus PV of the market price at the end of the period .i.e.
$P_{0}=D_{1}+P_{1} / 1+k_{e}$

Where,

Po = market price at the beginning (zero period)
$\mathrm{K}_{\mathrm{e}} \quad=$ cost of equity capital (assumed constant)
$D_{1} \quad=$ dividend per share to be received at the end of the period
$P_{1} \quad=$ market price of the share at the end of the period

No external financing

Assuming that the firm does not resort to any external financing, the market value of the firm can be computed as follows:
$n P o=n\left(d_{1}+P_{1}\right) / 1+k_{e}$

Where,
$\mathrm{n}=$ Numbers of equity shares at zero periods.

New shares

Assuming that the retain earnings is not sufficient to finance the investment needs of the funds, in that case issuing new shares is the other alternative. Say m is the number newly issued equity share at the price of $\mathrm{P}_{1}$.

$$
\begin{equation*}
n P o=n d_{1}+P_{1}(n+m)-m P_{1} / 1+k_{e} \tag{iii}
\end{equation*}
$$

Where,
$\mathrm{n} \quad=$ no. of share at the beginning.
$\mathrm{m} \quad=$ no. of equity shares issued at the end of the period.

Total numbers of shares

The issuing of new stock is determined by the amount of investment in period 1 not financed by retained earnings. The total numbers of new shares can be found out by the following way:
$m P_{1}=I-\left(E-n d_{1}\right)$

Where,
$\mathrm{mP}_{1}=$ the amount collected by issuing new shares
m = the numbers of shares (new)
$\mathrm{P}_{1} \quad=$ price of shares

I = total new investment requirement

E = earning of the firm during the period.
nd $_{1} \quad=$ total dividend paid
$\mathrm{E}-\mathrm{nd}_{1}=$ retained earning
Conclusion

By substituting the value of $m p 1$ from equation ${ }^{(i v)}$ to the equation ${ }^{\text {(iii) }}$, we find:

$$
\begin{aligned}
n P_{0} & =n d_{1}+P_{1}(m+n)-I+E-n d_{1} / 1+k_{e} \\
& =P_{1}(m+n)-I+E / 1+k_{e}
\end{aligned}
$$

In such a way, M-M approach concludes its result, that there is no any role of dividend ( $d 1$ ) in the above equation. So Modigliani and Miller conclude that dividend policy is irrelevant \&dividend policy has no effect on the shares price.

## 4. Friend and Puckett's study

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 chemicals, electric utilities, electronics, food and steels. These industries were selected to permit a distinction made between the results for growth and nongrowth industries \& to provide a basis for comparison with result by other authors for earlier years. They also considered cyclical \& no cyclical industries, which they covered. The study periods covered a boom year for the economy when stock prices leveled off after rise (1956) \& a somewhat depressed year for the economy when stock prices however rose strongly.

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

Symbolically, their price function \& dividend supply function are,
Price function: $P_{t}=a+b D_{t}+e R_{t}+d(E / P)_{t-1}$

Where,
$\mathrm{P}_{\mathrm{t}} \quad=$ share price at time t
$\mathrm{D}_{\mathrm{t}} \quad=$ dividends at time t
$\mathrm{R}_{\mathrm{t}} \quad=$ retained earnings at time t
$(\mathrm{E} / \mathrm{P})_{\mathrm{t}-1}=$ lagged earning price ratio

Dividend supply function: $\mathrm{D}_{\mathrm{t}}=\mathrm{e}+\mathrm{fE}_{\mathrm{t}}+\mathrm{gD}_{\mathrm{t}-1}+\mathrm{h}(\mathrm{E} / \mathrm{P})_{\mathrm{t}-1}$
Where,
$\mathrm{E}_{\mathrm{t}} \quad=$ earnings per share at time t
$\mathrm{D}_{\mathrm{t}-1} \quad=$ last year dividend

Their study was based on the following assumptions:

1. Dividends do react to year-to-year fluctuations in earnings.
2. Price doesn't contain speculative components.
3. Earnings fluctuations may not sum zero over the sample.

Their regression results based on the equation of $P_{t}=a+b D_{t}+c R_{t}$ showed the customary strong dividend \& relatively weak retained earnings effects in three of the five industries i.e. chemicals, foods \& steel. Again they tested other regression equations by adding lagged earnings price ratio to the above equation \& resulted the following equation: $P_{t}=a+b D_{t}+c R_{t}+d(E / P)_{t-1}$ they found the following results: they found that more than $80 \%$ of the variation in stock prices can be explained by three independent variables. Dividends have a predominant influence on stock prices in the same three out of five industries but they found the differences between the dividends \& retained earnings coefficient are not quite so marked as in the first set of regressions. They also found that the dividends \& retained earnings coefficient are closer to each other for all industries in both years expect for steels in 1956 \& the correlation are higher, again expect for steels.

They also calculated dividends supply equations i.e. $\mathrm{D}_{\mathrm{t}}=\mathrm{e}+\mathrm{fE}_{\mathrm{t}}+\mathrm{gD} \mathrm{t}_{\mathrm{t}-1}+\mathrm{h}(\mathrm{E} / \mathrm{P})_{\mathrm{t}-1}$ \& 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-earning ratio does not have a significant effect on dividend payout. On the other hand, they noted that the retained earnings effect
is increased relatively in three of the four cases tasted. 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 $\&$ retained earnings effects on stock price though such a bias might be marked if the disturbing effect of short run income movements and sufficiently great. ${ }^{\text {iii }}$

Further, they lagged price as a variable instead of lagged earnings price ratio \& shows that more than $90 \%$ of variation in stock prices can be explained by three independent variables \& retained earnings received greater relative weight then dividends in most of the cases. The only exception was steels \& foods in 1958. They considered chemicals, electronics and utilities as growth industries, in these groups \& the retained earnings effect was larger than the dividend effect for both years covered. For the other two industries, namely foods \& steels, there were no significant systematic differences between the retained earnings \& dividend coefficients.

Similarly, they tested the regression equation of $P_{t}=a+b D_{t}+c R_{t}$ by using normalized earnings again. They obtained normalized retained earnings by subtracting dividends from normalized earnings. That normalized procedure was based on the period 1950-1961. Again they added prior year's normalized earning price variable \& they compared the result. Comparing the result they found that there was significant role of normalized earnings and retained earnings but effects of normalized price earning ratio was constant. When they examined the later equation, they found that the difference between dividend \& retained earnings coefficients disappeared. Finally they concluded that management might be able to increase prices somewhat by raising dividends in foods \& steel industries.

They conducted more detailed examination of chemical samples. That examination disclosed that the result obtained largely reflected the undue regression weighting given the three firms with price deviating most from the average price in the sample of 20 firms \& retained earnings as a price determinant.

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 \& in growth industries by greater retention i.e. low dividends.

## 4. Lamont's study

The study shows that the aggregate dividend payout ratio forecast excess return on both stocks and corporate bonds. It is to mean, high dividends forecast high return \& high earnings forecast low return. The correlation of earnings with business conditions gives them predicted power of returns; they contained information about future returns that is not captured by other variables. Dividend \& earnings contribute explanation power at short horizon but however for long horizon stock price matters.

There are two reasons, why the payout ratio forecast return i.e.

1. The payout ratio forecasts return because the level of dividends forecasts return. High dividend predicts high future return.
2. The payout ratio forecasts return because the level of earnings forecasts return

Conclusion of the study

The dividend payout ratio helps forecast returns because both dividends and earnings have separately identifiable forecasting ability.

1. Dividend contains information about future returns because they help measure the value of future dividends while earnings contain information because they are corrected business conditions.
2. Both high current prices and high current earnings forecast low future returns.
3. Using earnings yield alone to forecast return is a bad idle.
4. High dividends forecast high future returns so using dividend yield alone to forecast return are more successful.
5. Dividend price by any smooth accounting variation capturing normal growth produces roughly the same forecasting variables.

### 2.2 Review of Previous Studies

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

Gautam (2005) 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 (2006) carried on a research on 'The Study of Dividend Policy of the Commercial Banks in Nepal" on May 2006. 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.

Shah (2009) carried out a research on "Cash Dividend Practice and its Impact on Share Price in Nepal". It covered 5years 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 (2010) 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. Higher dividend payout ratio (D/P ratio) indicates that the firm is paying higher dividend to its shareholders and lower $\mathrm{D} / \mathrm{P}$ ratio implies that the firm is retaining its profit to profitable investment opportunities.

Dahal (2011) 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.


### 2.3 Research Gap

Research gap focuses that the researcher how much trying to give new things from his/her study with compare to previous studies held by different researcher. Due to changing the time and circulation of environment the previous and present may be different in many ways. This is a research gap between the present research and previous research. Though many affiliated researchers have been done in this area but these have been very few exclusive researchers on this subject. This study may be a new study in this field and no study has been made in these topics in Nepal.

## CHAPTER-III

## RESEARCH METHODOLOGY

Research methodology is the way to solve about research problem systematically. Therefore, research methodology is the research methods on techniques to use through the entire study. On the other words research methodology is the process of arriving at the solution of problem through planned and systematic dealing with collection, analysis and interpretation of the fact and figures.

This study will consider the secondary historical data. The methods of analysis and research methodology will depend upon the data available. The research design is less descriptive but more prescriptive.

In order to achieve the objectives of the study, the following research methodology is followed which includes research design, sources and types of data, data gathering instruments and procedures and tools for analysis. To analyze the collected data statistical tools means,

### 3.1 Research Design

Research design is a plan to obtain the answer of research question through analysis of data; research is a systematic research for knowledge. The research design basically followed the comparative evaluations of dividend policy in the sample firms and their effect on stock prices. So, analytical approach has been considerably adopted to present the data.

Research design is constructed in such a way which refers to the entire process of planning and carrying out a research study. Identification, selection, and formulation of a research problem may be considered as the planning stage of a research. The remaining activities refer to the designs, operation and completion of the research study. Analytical as well as descriptive research will be applied as the research design for this study. Under this study, the secondary data i.e. financial
statement of five years from 2006/07 to 2010/11 of commercial banks, taken from respective firms and websites.

### 3.2 Population and samples

The total variables/observation is simply called population. There are 32 commercial banks (including government owned, private and joint ventures) at present in the market and only one banks is taken as sample of the study. The process of selecting the sample out of the population is called sampling. In this study, the population size is 32 and the sample size is 2 . The sample size is $6.27 \%$ of the population size in this study, there are various types of sampling procedure but researcher selects judgment sampling.

1. Nepal Arab Bank Limited (Nabil)
2. Himalayan Bank Limited (HBL)

### 3.3 Nature and sources of data

Both primary and secondary data have been used in this study. Primary data are collected through questionnaire as well as interview with the related affaire and staff of related Banks also helped for collection of data. Secondary data are collected from different sources: Nepal stock exchange, Annual reports and website.

### 3.4 Research tools used

## a) Financial tools

Financial tools are those which help to study the financial strength and weakness of the sample firms. The financial tools used in this study are briefly presented below;

## 1. Earning per share (EPS)

EPS measures the profit available to the equity shareholders on a per share basis, that is, the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by the number of the outstanding shares or common stock. The profits available to the ordinary shareholders are represented by net profits after taxes and preference dividend. Thus,

$$
\text { EPS }=\frac{\text { Net profit available to equity holders }}{\text { Number of common stock outstanding }}
$$

## 2. Dividend per share (DPS)

DPS is the dividends paid to the shareholders on per share basis. In other words, DPS is the net distributed profit belonging to the shareholders divided by the number of ordinary shares or common stock outstanding. That is,

$$
\mathrm{DPS}=\frac{\text { Total Dividend }}{\text { Number of common stock outstanding }}
$$

## 3. Dividend Payout (D/P) Ratio

D/P ratio measures the relationship between the earnings per share and dividend per share. It is calculated to indicate percentage of the profit on share that is distributed as dividend. Thus,

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

## 4. Market Price per share (MPS)

MPS is that values of stock, which can be obtained by affirm from the market. MPS is one of the variables, which is affected by DPS of the firm. If the earning per share and dividend per share are high, the market value of the share will also be high. The capital market determines MPs. In this study the market price of share means the closing price of the share indicated in the NEPSE index.

## b) Statistical Tools

## i) Arithmetic Mean

Arithmetic mean of a given set of observation is their sum divided by the number of observation. In general $X_{1}, X_{2} \ldots X_{n}$ are the given " $n$ " observations, than their arithmetic mean, usually denoted by $\bar{X}$ is given by:

$$
\begin{aligned}
\bar{X}= & \left(\mathrm{X}_{1}+\mathrm{X}_{2}+\ldots \ldots \ldots+\mathrm{X}_{\mathrm{n}}\right) \quad \text { or, } \bar{X}=\Sigma \mathrm{x} / \mathrm{n} \\
& \frac{\mathrm{n}}{}
\end{aligned}
$$

Where $\bar{X}$ denotes mean, $\mathrm{X}_{1}, \mathrm{X}_{2}$ and $\mathrm{X}_{\mathrm{n}}$, are given set of observations and n denotes number of items observed.

## ii) Coefficient of variation (CV)

The coefficient of variation is the relative measure of dispersion, comparable across, which is defined as the ratios of the standard deviation to the mean expressed in percent. Thus,

Coefficient of Variation $\quad$ C.V. $=\frac{\sigma}{\bar{X}} \times 100$

Where,
$\sigma=$ Standard Deviation
$\bar{X}=$ Mean average

The higher CV denotes to the higher variability of variable and vice versa.
iii) Standard Deviation (S.D)
S.D means the absolute measure of dispersion in which the drawbacks present in other measures of dispersion are removed. It is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure of dispersion. The greater amount of dispersion greater the S.D will be. A small S.D means high
degree of uniformity of the observation as well as homogeneity of a series; a large S.D means just opposite.
S.D is defined as the positive square root of the mean of the square of the square of the deviations taken from the arithmetic mean. Thus, S. D. denoted as,

$$
\delta=\sqrt{\frac{1}{n} \sum(X-\bar{X})} 2
$$

Where, $n=$ no of samples/ values.

## iv) Coefficient of correlation (r)

Correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another ${ }^{44}$.The coefficient of correlation measures the direction of relationship between two sets of figures. It is the square root of the coefficient of determination. Correlation coefficient can either be positive or it can be negative. If both variables are changing in the same direction, the correlation is said to be positive but when the variations in the two variables take place in opposite direction, the correlation is termed as negative. In this study, coefficient of correlation is calculated between stock prices and dividends, stock prices and retained earned earnings, stock prices and lagged earning.

In symbol,
Coefficient of Correlation $(r)=\frac{\sum X Y}{N \sigma_{1} \sigma_{2}}$

Where, $X=X-\bar{X}$

$$
\begin{aligned}
& Y=Y-\bar{Y} \\
& \sigma_{1}=\text { Standard series of } \mathrm{X} \\
& \sigma_{2}=\text { standard series of } \mathrm{Y} \\
& \mathrm{~N}=\text { Number of pair of Observations }
\end{aligned}
$$

## v) Trend Analysis

Among the various methods of determining trend of time series, The most popular and mathematical method is the least square method. Using this least square method, it has been estimated the future trend values of different variables. For the estimation of linear trends line following formula can be used:
$Y=a+b x$

Where, $\quad \mathrm{Y}=$ Dependent variable
$\mathrm{X}=$ Independent variable
$\mathrm{A}=\mathrm{Y}-$ intercept
$B=$ Slope of the trend line

## CHAPTER-IV

## ANALYSIS OF DATA

This chapter will analyze the various financial indicators and variables are presented. Therefore, this chapter is based on the presentation and analysis of the secondary data, which help to conclude and draw some recommendations.

### 4.1 Analysis of Financial Indicators and Variables

### 4.1.1 Analysis of EPS

Earnings per share (EPS) are one of the most important financial indicators, which measure the earning capacity of a firm or profit available to the ordinary shareholders on a per share basis.

Table: 4.1

## Analysis of EPS

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 60.66 | 137.08 |
| $2007 / 08$ | 62.74 | 115.86 |
| $2008 / 09$ | 61.90 | 113.44 |
| $2009 / 10$ | 31.80 | 83.81 |
| $2010 / 11$ | 44.66 | 70.67 |
| Mean | 52.35 | 104.17 |
| S.D | 13.69 | 26.66 |
| CV | 26.15 | 25.59 |

Source: Annual report of HBL \& NABIL

Figure: 4.1

EPS of HBL \& NABIL


The above mentioned comparative table no. 4.1 and figure 4.1 shows that EPS of HBL and NABIL of last five years which is in fluctuating and in decreasing trends accept 2007/08 of HBL. The EPS of the company should be compared with the average and the EPS of other bank. EPS simply shows the profitability of the firm on a per share basis.

Here, the average EPS of the HBL become Rs. 52.35, from above and below the value indicates the profitability of the common shareholders investment. Higher earning per share from average is preferable and vice versa, From 2006/07 to 2008/2009 the value was higher than the mean but in 2009/10 the value is in decline position and in 2010/11 it is little bit increasing but less than mean value. It shows that the firm's performance is not good.

Similarly, NABIL shows higher EPS in 2006/07 to 2008/09 than average whereas in other years shows lower EPS. The average deviation of NABIL is higher than HBL. It shows that there is little bit risk to invest by shareholders. According to above table it shows that the firm's performance is not good because it is in decreasing trend.

Thus, the analysis of EPS trend shows that average EPS in NABIL is higher than EBL i.e. NABIL>HBL. It indicates that the NABIL's profitability of common shareholders investment is better than H BL respectively.

### 4.1.2 Analysis of DPS

DPS is that amount, which paid to common shareholders on a per share basis. DPS shows that what exactly do the ordinary shareholders receive. It is calculated by dividing the total dividend to equity shareholders by the total numbers of equity shares. The following table shows the dividend per share (DPS) of the sample firms.

Table: 4.2

## Analysis of DPS

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 15.00 | 100 |
| $2007 / 08$ | 25.00 | 60 |
| $2008 / 09$ | 12.00 | 35 |
| $2009 / 10$ | 11.84 | 30 |
| $2010 / 11$ | 16.84 | 30 |
| Mean | 16.14 | 51 |
| S.D | 5.38 | 30.08 |
| CV | 33.36 | 58.99 |

Source: Annual report of HBL \& NABIL

Figure: 4.2
DPS of HBL \& NABIL


The above table and figure shows that dividend per share of HBL and NABIL fluctuating trends, where as DPS of NABIL is in decreasing trends, throughout the study period. The dividend paid by HBL and NABIL is regular, so that the firm has definite dividend policy. The average dividend per share paid by HBL is Rs. 16.14. The highest dividend is Rs 25 paid in year 2007/08 and 2009/10 by HBL where as lowest DPS is Rs.11.84 in 2009/10. The firm is not able to maintain its average DPS from 2006/07, 2008/09 and 2009/10. In this firm, there is low risk than NABIL i.e. deviation is lower and c.v is 33.36 .

The NABIL has paid yearly dividend in fluctuating trends. The average DPS paid by NABIL is Rs. 51 which is highest among the selected firms. The highest DPS of Rs100 in year 2006/07 and lowest DPS is Rs. 30 in year 2009/10 and 2010/11. The dividend paid to shareholders is regular and has the clear cut dividend policy.

The means DPS of HBL and NABIL are 16.14 and Rs 51 respectively. It shows that the means DPS of NABIL is greater than HBL i.e. NABIL>HBL. Likewise the coefficient of variation (CV) of HBL is less than NABIL.

Thus, the analysis of the DPS trend shows the average dividend per share paid by HBL and NABIL, where higher dividend per share creates positive attitude of the shareholders toward the bank, which consequently helps to increase the market value of the shares. It is the indicator of better performance of the firm. In this regard, NABIL is better than HBL.

### 4.1.3 Analysis of MPS

Market price of share is that value of stock, which can be received by firm or equity holders selling it in capital market. The capital market determines MPS. In this analysis MPS represents the closing market price of NEPSE Index of the sample firms and Annual report of HBL and NABIL. The following table shows the market price of stock (MPS) of the sample firms:

Table: 4.3
Analysis of MPS

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 1740 | 5050 |
| $2007 / 08$ | 1980 | 5275 |
| $2008 / 09$ | 1760 | 4899 |
| $2009 / 10$ | 816 | 2384 |
| $2010 / 11$ | 575 | 1252 |
| Mean | 1374.2 | 3772 |
| S.D | 632.45 | 1832.99 |
| CV | 46.02 | 48.59 |

Source: Annual Report of HBL \& NABIL

## Figure: 4.3

MPS of HBL \& NABIL (in Rs)


The above mentioned table and figure shows that the average yearly MPS in HBL and NABIL are Rs. 1374.2 and Rs. 3772 respectively. Among the selected banks, the NABIL shows the highest MPS in all study periods. The highest market price of NABIL is Rs. 5275 in the year 2007/08 and lowest is Rs. 1252 in year 2010/11. Its S.D is higher than the HBL and CV is 48.59 .

Similarly, the highest and lowest MPS of HBL is Rs. 1980 and Rs. 575 in 2007/08 and 2010/11 respectively. These MPS of both sample banks are fluctuating treads and decreasing trend. Standard deviation of HBL is 632.45. The CV of HBL is less than NABIL. The higher C.V indicator the greater variability of MPS in the respective sectors. The MPS is highly affected by EPS and DPS.

### 4.1.4 Analysis of $\mathrm{D} / \mathrm{P}$ ratio

Dividend payout ( $\mathrm{D} / \mathrm{P}$ ) ratio indicates that what percentage of actual earnings of a firm has been received by the ordinary shareholders. It is calculated by dividing the dividend per share to ordinary shareholders by the earning per share (EPS). The following table shows that dividend payout (D/P) ratio of sample Bank.

Table: 4.4

## Analysis of $\mathbf{D / P}$ ratio

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 24.73 | 72.95 |
| $2007 / 08$ | 39.85 | 51.79 |
| $2008 / 09$ | 19.39 | 30.85 |
| $2009 / 10$ | 37.23 | 35.80 |
| $2010 / 11$ | 37.71 | 42.45 |
| Mean | 31.78 | 46.77 |
| S.D | 9.13 | 16.61 |
| CV | 28.72 | 35.51 |

Source: Annual Report of HBL \& NABIL

Figure: 4.4
DPS of HBL \& NABIL (in percentage)


The comparisons of payout ratio reflect the management attitude towards the treatment of profit in respect to distribution of dividend and retained earnings.

From above comparative table shows that the average dividend payout ratio of HBL is $31.78 \%$. However, the firm paid dividend regular, this reflects the management has given more consideration to the payment in dividend. The highest payout ratio of HBL is $39.85 \%$ in $2007 / 08$ which shows beyond the average payout ratio and lowest payout ratio is $19.39 \%$ in 2008/09. It shows that, the firm is not ding good performance.

NABIL shows $46.77 \%$ average dividend payout ratio, which is the highest average payout ratio than HBL. This firm has fluctuating in paying dividend. It maintained its average payout ratio in the years 2006 to 2008, other year's performance are under the yearly average .the deviation payout is lower than other firms, so that there low risk to invest by the shareholders.

The average dividend payout ratio of HBL and NABIL are $31.78 \%$ and $46.77 \%$ respectively. It indicates that the $\mathrm{D} / \mathrm{P}$ ratio of NABIL is higher than HBL. Highest \% of D/P ratio of HBL and NABIL are $39.85 \%$ and $72.95 \%$ respectively. The C.V of D/P ratio of HBL 28.72 is less than NABIL 35.51. Thus, the trend analysis of dividend payout ratio trends shows the NABIL's D/P ratio to shareholders is much better than HBL.

### 4.1.5 Analysis of Dividend yield

A ratio between dividends per share (DPS) to market value per share (MPS) is known as dividend yield ratio. It evaluates the shareholders return in relation to the market value of share.

Table: 4.5

## Analysis of Dividend yield

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 0.87 | 1.99 |
| $2007 / 08$ | 1.27 | 1.15 |
| $2008 / 09$ | 0.69 | 0.72 |
| $2009 / 10$ | 1.46 | 1.27 |
| $2010 / 11$ | 2.93 | 2.41 |
| Mean | 1.44 | 1.50 |
| S.D | 0.89 | 0.68 |
| CV | 61.81 | 45.30 |

Source: Annual report of HBL \& NABIL

Figure: 4.5
Analysis of DPS (in percentage)


The above mentioned table, the dividend yield ratio of both banks is in fluctuating trends in all years. The average value of HBL dividend yield is $1.44 \%$, which would maintain only in 2009/10 and 2010/11. The highest dividend yield is 2.95\% and lowest dividend yield is $0.69 \%$.

Similarly, the average dividend yield of NABIL is $1.50 \%$, which would be the highest average value among the HBL. NABIL has not maintained its average in all year accept 2006/07. It said that shareholders evaluate return in relation to the MPS. It indicates that the risk to the shareholders.

Thus, the analysis of dividend yield shows that average dividend yield in NABIL is higher than HBL i.e. NABIL>HBL likewise, the C.V of HBL and NABIL are $61.81 \%$ and $45.30 \%$. Here, the C.V of NABIL is lower than NABIL. Due to lower C.V and higher average value, NABIL shows good performance than HBL. Whereas S.D of HBL \& NABIL is 0.89 and 0.68 respectively.

### 4.1.6 Price/Earning multiple

Price/earnings multiple is calculated as the price of a share dividend by dividend yield. The reciprocal of the P/E ratio is called earning yield. P/E ratio is called earning yield. $\mathrm{P} / \mathrm{E}$ ratio is widely used by the security analyst to value the firm's performance as expected investors. It indicates investor's judgment an expectations about the firm's performance. Management is also interested in the market appraisal of the firm's performance and will like to final the cause.

Table 4.6
Analysis of P/E ratio

| Year | HBL | NABIL |
| :---: | :---: | :---: |
| $2006 / 07$ | 28.68 | 36.84 |
| $2007 / 08$ | 31.56 | 45.53 |
| $2008 / 09$ | 28.43 | 43.19 |
| $2009 / 10$ | 25.66 | 28.45 |
| $2010 / 11$ | 12.88 | 17.72 |
| Mean | 25.44 | 34.34 |
| S.D | 7.33 | 11.41 |
| CV | 28.81 | 33.22 |

Source: Annual report of HBL \& NABIL
Figure: 4.6
Analysis of P/E Ratio


In the above table and figure shows $\mathrm{P} / \mathrm{E}$ multiple of HBL and NABIL are in fluctuating trends. P/E multiple is as measures of performance and prospects of shares. A high P/E ratio is considered good but it could be high not because the share price is high but because the EPS are quite low.

The average P/E multiple of HBL is 25.44 , which would maintained in all mentioned year except in 20010/11. The highest P/E multiple is 31.56 and lowest $\mathrm{P} / \mathrm{E}$ multiple is 12.88 . Here, the standard deviation is 7.33 , which is risk for the investors in per share. The performance of HBL is good because it maintains the average $\mathrm{P} / \mathrm{E}$ multiple from 2006/07 to 2009/10.

Similarly, the NABIL has the average P/E multiple of 34.34 over five years period. The firm has not maintained its average in 2009/10 and 2010/11. The highest P/E multiple is 45.53 and lowest P/E multiple is 17.72 . Here, the standard deviation is 11.41 and C.V is 33.22 where it has also good performance.

The coefficient of P/E multiple of NABIL is lower than HBL. It indicates, the NABIL is more consistent than HBL.

### 4.2 Statistical Analysis

Statistical tool is one of the important tools to analyze the data. There are various tools for the analysis of tabulated data such as, mean, standard deviation, regression analysis, co-relation analysis, trend analysis, various types of tests etc. There is convenient statistical tools are used in this thesis study.

### 4.2.1 Coefficient of Correlation Analysis

Co-efficient of co-relation shows the relationship between two or more than two variables. It measures that the two variables are positively or negatively co-related. For this purpose, Karl Pearson's co-efficient of correlation has been taken and applied to find out and analyze the relationship between MPS and DPS, MPS and EPS, DPS and EPS, D/P Ratio of HBL and NABIL, dividend yield and Price/earning multiple of HBL and NABIL using Karl Persons coefficient of correlation, value of coefficient of determination etc.

Table: 4.7
Coefficient of Correlation Analysis (Individuals)

| Componants | HBL |  | NABIL |  |
| :---: | :---: | :---: | :---: | :---: |
|  | correlation | determination | correlation | determination |
| MPS and DPS | 0.3814 | 0.1455 | 0.6356 | 0.4039 |
| MPS and EPS | 0.8846 | 0.7825 | 0.9351 | 0.8743 |
| DPS and EPS | 0.4275 | 0.1828 | 0.8419 | 0.7088 |

Source: Annual report of HBL \& NABIL

From the above table, it is found that coefficient of correlation between MPS and DPS of HBL and NABIL is 0.3814 and 0.6356 respectively. It is shows that both have the positive relationship between these two variables. It refers that MPS and and DPS of HBL move together very closely but not proportionately. Moreover, the coefficient of determination of HBL is 0.1455 . It means 14.55 percent of variation in MPS has been explained by DPS. Similarly, value of coefficient of determination of NABIL is 0.4039 . It refers that 40.39 percent variance in MPS are affected by DPS.

Again, the researcher found that the coefficient of correlation between MPS and EPS of HBL is 0.8846 . In addition, coefficient of determination of HBL is 0.7825 . It means only 78.25 percent of MPS is explained by EPS. Similarly, there is high degree correlation positive coefficient between MPS and DPS of NABIL, which is indicator by correlation coefficient of 0.9351 . The value of coefficient of determination is found 0.8743 this refers that 87.43 percent of the variation.

Above Table shows correlation coefficient between, DPS and EPS 0.3814 of HBL and 0.8419 of NABIL. It refers that there is positive correlation between these two variables. Here, 18.28 percent of contribute by DPS and EPS as its coefficient of determination of 0.1828 shows. NABIL also has high degree positive correlation i.e. 0.8419 between HBL and NABIL. The coefficient of determination is 0.7088 i.e. 70.88 percent.

Coefficient of correlation of total $\mathrm{D} / \mathrm{P}$ ratio, dividend yield and Price/earning multiple between HBL and NABIL shows as follows.

Table: 4.8

## Co-efficient Of Correlation (Both)

| Componants | Correlation (EBL \& NABIL) |  |
| :--- | :--- | :--- |
|  | correlation | determination |
| D/P Ratio (HBL \& NABIL) | $(0.0531)$ | 0.0028 |
| dividend yield (HBL \& NABIL) | 0.7122 | 0.5072 |
| Price/earning multiple (HBL \& NABIL) | 0.9286 | 0.8624 |

Source: Annual report of HBL \& NABIL
Above table shows how the $\mathrm{D} / \mathrm{P}$ ratio of HBL and NABIL is related, here correlation between $\mathrm{D} / \mathrm{P}$ ratio of HBL and NABIL is (0.0531). Above correlation coefficient shows that there is negative correlation between this two banks and coefficient of determination, this shows the 0.28 percent of the degree of relationship. The degree of relationship between these two banks is low and negative.

The above table reveals that there is positive correlation between HBL and NABIL in case of dividend yield. The coefficient of determination is 0.5072 , which shows the only 50.72 percent of the degree of relationship.

Above Table show that there is high degree positive correlation between the Price/earning multiple of HBL and NABIL. The correlation coefficient between two bank is 0.8624 . It means Price/earning of these two banks moves in the same direction in high proportion.

### 4.2.2 Time Series Analysis (Trend Analysis)

Trend analysis plays an important role in the analysis and interpretation of financial statement. Trend in general terms, signifies a tendency. It helps in forecasting and planning future operation. Trend analysis is a statistical tool, which shows the previous trend of the financial performance and forecasts the future financial results of the firms. This is calculated by the least square method. Which are as follows:
$Y=a+b x$

Where,
$\mathrm{Y}=$ dependent variable, $\mathrm{a}=\mathrm{Y}$-intercept,
$\mathrm{b}=$ slope of trend line or annual growth rate,
$\mathrm{X}=$ deviation from some convenient time periods.

Let trend line be
$\mathrm{Y}=\mathrm{a}+\mathrm{bx}$

Where $\mathrm{x}=\mathrm{X}$ - Middle year

Where as
$\mathrm{Yc}=30709.14+5883.931 * \mathrm{x}$ of HBL
$\mathrm{Yc}=37742.46+6720.34 * \mathrm{x}$ NABIL

## A) Trend Analysis of Earnings per share (EPS)

Deposits are the important part in banking sector hence its trend for next five years will be forecasted for future analysis. Here the effort has been made to calculate the trend values of EPS of HBL and NABIL for further five year.

Table: 4.9

| Trend Analysis on EPS of HBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 33.47 | 54.711 |
| $2012 / 13$ | 27.176 | 38.224 |
| $2013 / 14$ | 20.882 | 21.737 |
| $2014 / 15$ | 14.588 | 5.25 |
| $2015 / 16$ | 8.294 | -11.237 |

Source: Annual report of HBL \& NABIL

## Figure: 4.7

Trend of EPS


Above Table and figure shows that EPS of HBL and NABIL. Both Banks is in decreasing trend. For EPS there is negative value on NABIL but whereas HBL has positive value. In 2015/16 NABIL has -11.23 MPS it indicates that one Rs increasing in EPS is decreasing in 11.23. It means that if other things remaining the same. It shows that the EPS decreasing by -11.23 value every year. The negative trend value means the bank EPS is less than par value.

## B) Trend Analysis of dividend per share (DPS)

Here, the trend values of DPS Between HBL and NABIL have been calculated for further Five years. The following Table shows the actual and trend values of HBL and NABIL

Table: 4.10

| Trend Analysis on DPS of EBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 13.29 | 0 |
| $2012 / 13$ | 12.344 | 0 |
| $2013 / 14$ | 11.396 | -34 |
| $2014 / 15$ | 10.448 | -51 |
| $2015 / 16$ | 9.5 | -68 |

Source: Annual report of HBL \& NABIL
Figure: 4.8
Trend of DPS


Above Table depicts that DPS of HBL and NABIL. Both Banks has in decreasing trend but NABIL has less than zero DPS. The actual value of DPS for HBL is more higher than relation to NABIL. The trend projected for father five year FY 2011/12 to FY 2015/16. From the above analysis, it is clear that HBL gives more dividend than NABIL. The nagative value of trend value means the banks DPS is less than par value. If other things remaining the same it shows that the value of DPS decreasing by negatively.

## C) Trend Analysis of Market price of share (MPS)

Here, the trend values of net profit of HBL and NABIL have been calculated for five years FY 2006/07 to FY 2010/11 and forecasting of the same for next five year till FY 2011/12 to FY 2015/16.

Table: 4.11

| Trend Analysis of MPS of EBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 326 | 625.9 |
| $2012 / 13$ | -23.4 | -422.8 |
| $2013 / 14$ | -372.8 | -1471.5 |
| $2014 / 15$ | -722.2 | -2520.2 |
| $2015 / 16$ | 1071.6 | -3568.9 |

Source: Annual report of HBL \& NABIL

Figure: 4.9

## Trend of MPS



The above table and figure shows the relationships between MPS of HBL is decreasing, it becomes negative but at final year 2014/15 it takes good market price in future. NABIL bank has negative market price per share, it is getting loss in future so HBL is better in future. If other things remaining the same it shows that the value of DPS decreasing by negatively. The negative trend value means the banks MPS is less than par value.

## D) Trend Analysis of D/P Ratio

Under this topic, an attempt has been made to analyze trend analysis D/P Ratio of HBL and NABIL for further five years.

Table: 4.12

| Trend Analysis of D/P Ratio of EBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 38.784 | 23.671 |
| $2012 / 13$ | 41.118 | 15.972 |
| $2013 / 14$ | 43.452 | 8.273 |
| $2014 / 15$ | 45.786 | 0.574 |
| $2015 / 16$ | 48.12 | -7.125 |

Source: Annual report of HBL \& NABIL
Figure: 4.10
Trend of D/P Ratio


Above Table and figure depicts that D/P Ratio of HBL and NABIL. HBL has in increasing trend. The ratio of HBL are 38.784, 41.118, 43.452, 45.786 and 48.12 in f/y 2011/12, 2012/13, 2013/14, 2014/15 and 2015/16 respectively. The actual ratio of NABIL is in decreasing trend it got negative ratio in 2015/16. The trend projected for father five year FY 2011/12 to FY 2015/16. From the above analysis, it is clear that EBL is better than NABIL. If other things remaining the same it shows that the value of DP ratio decreasing by negatively. The negative trend value means the banks DP ratio is less than par value.

## E) Trend Analysis of Dividend yield

The trend for next five years will be forecasted for future analysis. Here the effort has been made to calculate the trend values of Dividend Yield of HBL and NABIL for further five year.

## Table: $\mathbf{4 . 1 3}$

| Trend Analysis of Dividend Yield of EBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 2.737 | 1.796 |
| $2012 / 13$ | 3.168 | 1.892 |
| $2013 / 14$ | 3.599 | 1.988 |
| $2014 / 15$ | 4.03 | 2.084 |
| $2015 / 16$ | 4.461 | 2.18 |

Source: Annual report of HBL \& NABIL
Above Table and below figure shows that Dividend Yield of HBL and NABIL. Both Banks is in increasing trend. The rate of increment Dividend Yield for HBL seems to be higher than that of NABIL. The trend analysis has projected Dividend Yield in fiscal year FY 2011/12 to FY 2015/16. From the above trend analysis it is clear that NABIL has higher position in Dividend Yield than HBL.

Figure: 4.11

## Trend of Dividend Yield


F) Trend Analysis of Price/earning multiple

Table: 4.14

| Trend Analysis of EPS of EBL and NABIL |  |  |
| :---: | :---: | :---: |
| Year (x) | HBL | NABIL |
| $2011 / 12$ | 14.192 | 17.75 |
| $2012 / 13$ | 10.442 | 12.218 |
| $2013 / 14$ | 6.692 | 6.686 |
| $2014 / 15$ | 2.942 | 1.154 |
| $2015 / 16$ | -0.808 | -4.378 |

Source: Annual report of HBL \& NABIL

Figure: 4.12

## Trend of Price/earning multiple



Above Table and figure shows that Price/earning multiple of HBL and NABIL. Both Banks is in decreasing and fluctuating trend. The rate of increment Price/earning multiple for NABIL seems to be higher than that of HBL. The trend analysis has projected Price/earning multiple in fiscal year FY 2011/12 to FY 2015/16. From the above trend analysis both bank got negative position in 2015/16 Price/earning multiple ratio.

### 4.3 Major Findings

The analysis of dividend and market price of shares carried out from many dimensions have provided come substantial feedback. The findings discovered are as followings.
$>$ From the descriptive analysis, there is not consistency in dividend policy in the sample firms. It has indicated the need of dividend strategy as well as the need of proper analysis of the respective sectors of the firms.
$>$ From analysis, it is found that in aggregate, there is no stable dividend paid by the firms over years. The firm are paying fluctuating dividend. There are no firms adopting constant dividend payout ratio. Stable dividend influence considerable impact on valuation of shares if there are rational investors. However, this is yet to be realized by Nepalese firm management. Anyway, it is found those Nepalese firms have not followed any dividend policy.
> The MPS is affected by the financial position and dividend paid by the firms, in this regards the MPS of the sample firms is seem to be fluctuated. It denotes Nepalese investors are not treated fairly.
$>$ The lack of financial knowledge and the market efficiency has affected the market price of the share in all the firms. But it is theoretically argued.
> Earning per share of HBL is fluctuating trend and Nabil is in decreasing trend. The analysis of EPS shows, that the Nabil's profitability of common shareholders investment is better than HBL respectively in their respective sectors.
$>$ On the basis of $\mathrm{D} / \mathrm{P}$ ratio, Nabil is paying higher percentage of its earning as dividend than HBL. Nabil has the lowest fluctuation indicated by its C.V of $35.1 \%$.
$>$ Dividends paid by the selected firms are in fluctuating trends. The average Dividend paid by Nabil is greater than HBL. The highest fluctuation in DPS, due to higher C.V of Nabil, because they have no proper policy to pay dividend to shareholders. HBL has the lowest fluctuation in DPS as measured by C.V of 28.72 percent.
$>$ From analysis of dividend yield, the performance of Nabil shows good due to lower fluctuation and higher average value than other firms. Dividend yield evaluates the shareholders return in relation to the market value of share.
$>$ The average $\mathrm{P} / \mathrm{E}$ ratio of Nabil higher than HBL. Highest $\mathrm{P} / \mathrm{E}$ ratio indicates the favorable condition for the investor. The C.V analysis shows, lower risk in per unit of return.
> The relationship between MPS and DPS of HBL and Nabil as the shows the result, the correlation coefficient is $0.3814 \& 0.6358$ and the coefficient of determination shows $0.1455 \& 0.028$ and 0.4039 respectively. Again, correlation of MPS and EPS of HBL and Nabil is $0.8846 \& 0.9351$ and determination is 0.7825 and 0.8743 respectively. At last correlation between DPS and EPS of HBL and Nabil is $0.4275 \& 0.8419$ and determination is $0.1828 \& 0.7088$ respectively, which indicates that there is positively correlated relation between MPS \& DPS, MPS \& EPS and DPS \& EPS, which means higher the DPS higher will be MPS. The relationship between D/P Ratio (HBL \& NABIL) is negatively correlated, dividend yield and P/E ratio is positively correlated.
$>$ The selected firms are paying dividend which is insufficient. This has great barrier to attract people in productive mobilization of fund and erode the firm's credit rating.
$>$ In case of the shareholders do not have consent on firm's performance, they could sell their owners certificate and invest in their firm. However, this is really hindered by not disclosing the firms' information which is very important.
$>$ There is no legal rules' binding firm to pay dividend when they are running profitably. As already said, not only the firms do not have dividend policy but also the governments do not have any clear policy toward dividend. There is no provision in company at also.

## CHAPTER-V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

Every investor expects handsome earning on the investment. A firm that is able to distribute fair dividend, will be able to raise further capital from capital market. The total earning that a shareholder can gain from share investment is classified into dividend yield and capital gain yield. The company therefore needs to device's proper balance between retention and dividend distributions. In Nepal, only a few listed companies have paying regular dividends to their shareholders. Further companies have not been following stable dividend payout policy. On the other hand, the dividend payout ratio of listed companies in Nepal has not been able to distribute fair dividends.

The main focus of investors however is the dividend, but there is not any consistency and regular practice of dividend announcement in different firms. In popular practice of Nepal, when the firm has big earning they retain more and when they do not have good figure of earnings, they announce high dividend to protect their image in the capital market.

According to this study, the trend of HBL and NABIL had paid dividend in diminishing due to decrease trend of earning per share in the studying year.

Among the sample firms, NABIL is a strong firm with the financial market reputation, if the result of it compared to other firms, it can be said that although EPS affect DPS it is less concerned with MPS. Therefore the MPS is more or less dependent with EPS in the efficient capital market.

The measures for the improvement of present condition could be the formulation of sound dividend policy and adopt it strictly. The theoretical statement of this study is to study the impact of dividend policy on the market price of the stock, therefore, it is concluded that more or less the dividend policy depends on the earning per share of a company. Dividend paying firms are selected for the study
so that inferences can be made about implications of dividend. Instability of dividend and haphazard payout ratio is the most applied phenomena of Nepalese dividend distribution practices. Though there is positive impact of earnings per share and dividend per share on the market prices of stock, adequate consideration is not given to dividend. Verbal statement committed in prospectus is not materialized and management is left to work in its desired way.

The earning per share and dividend per share having the positive relation may also impact on market price of stock. For this argument, there were trend analysis formed.

The Trend analysis was formed to see the relationship of earning per share and dividend per share to the market prices and other ratios. It concludes that sometimes the increase in DPS and EPS affects the MPS and sometimes it does not.

### 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 some of the banks are paying high dividend and others are 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

After the detail analysis of impact of dividend policy on market price of common stock of selected joint ventures. Some suggestions have been recommended on the basis of major findings to improve the performance of the firm. It should adopt the comprehensive factor affected to the market prices of common stock from the very beginning to the end. The following actions should be implemented.
> Formulation of dividend policy will clearly guide the way on how to follow dividend distribution. The policy should be clearly determined whether the company is going to adopt stable policy, constant dividend payout ratio or low regular plus extra dividend.
$>$ The selected privately owned and joint ventures firms, the government should formulate legal rules regarding dividend policy. Some of the firms are in position to pay dividend but there is already unequal distribution of dividend as reflected by some cases. Therefore, the government should act in favor of investor's and bind these rules regarding dividend policy, the price of stock will be determined appropriately in the market.
$>$ All the activities and information regarding performance should be provided, so that investors can analyze the situation and invest his money in the best firm. Therefore, all the information about this factor should be timely provided by concerning body. As a result, stock price will be determined appropriately.
> The DPS analysis of HBL and NABIL shows that there is not any consistency of dividend policy in both sample firms. Therefore, these firms need to create somehow paying reasonable DPS every year, it is because higher DPS creates positive attitude of shareholders towards firm, which consequently helps to increase the market value of the shares. The
psychological value of the shareholders is also valued as the assets of the firm.
$>$ EPS in HBL and NABIL are in fluctuating trend; therefore these firms should search the fruitful investment opportunities, plan for profit maximization.

The correlation between MPS \& DPS of HBL and NABIL are positive, therefore this firms should try to increase DPS to better uplift the MPS in future.

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## APPENDICES

## Appendix: 1

## Computation Of D/P Ratio of HBL \& NABIL

| Year | DPS, HBL | EPS, HBL | D/P Ratio HBL (DPS/EPS) | DPS, NABIL | EPS, NABIL | D/P Ratio NABIL (DPS/EPS) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006/07 | 15 | 60.66 | 0.2473 | 100 | 137.08 | 0.7295 |
| 2007/08 | 25 | 62.74 | 0.3985 | 60 | 115.86 | 0.5179 |
| 2008/09 | 12 | 61.9 | 0.1939 | 35 | 113.44 | 0.3085 |
| 2009/10 | 11.84 | 31.8 | 0.3723 | 30 | 83.81 | 0.3580 |
| 2010/11 | 16.84 | 44.66 | 0.3771 | 30 | 70.67 | 0.4245 |

Source: Annual Report of sample Bank

## Appendix: 2

## Computation of dividend Yield of HBL \& NABIL

| Year | DPS, HBL | MPS, HBL | Dividend Yield <br> HBL <br> (DPS/MPS) | DPS, NABIL | MPS, NABIL | Dividend Yield <br> NABIL <br> (DPS/MPS) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2006 / 07$ | 15 | 1740 | 0.0086 | 100 | 5050 | 0.0198 |
| $2007 / 08$ | 25 | 1980 | 0.0126 | 60 | 5275 | 0.0114 |
| $2008 / 09$ | 12 | 1760 | 0.0068 | 35 | 4899 | 0.0071 |
| $2009 / 10$ | 11.84 | 816 | 0.0145 | 30 | 2384 | 0.0126 |
| $2010 / 11$ | 16.84 | 575 | 0.0293 | 30 | 1252 | 0.0240 |

Source: Annual Report of sample Bank

## Appendix: 3

## Computation of earning multiply of HBL \& NABIL

| Year | D/P Ratio <br> HBL | Dividend <br> Yield HBL | Dividend Yield <br> HBL <br> (D/P/EM) | D/P Ratio <br> NABIL | Dividend <br> Yield NABIL | Dividend Yield <br> NABIL <br> (D/P/EM) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2006 / 07$ | 0.2473 | 0.0086 | 28.68 | 0.7295 | 0.0198 | 36.84 |
| $2007 / 08$ | 0.3985 | 0.0126 | 31.56 | 0.5179 | 0.0114 | 45.53 |
| $2008 / 09$ | 0.1939 | 0.0068 | 28.43 | 0.3085 | 0.0071 | 43.19 |
| $2009 / 10$ | 0.3723 | 0.0145 | 25.66 | 0.3580 | 0.0126 | 28.45 |
| $2010 / 11$ | 0.3771 | 0.0293 | 12.88 | 0.4245 | 0.0240 | 17.72 |

Source: Annual Report of sample Bank

## Appendix -4

Calculation for Mean value, Standard Deviation \& Correlation between MPS and DPS

| Year | $\begin{gathered} \hline \text { MPS } \\ \left(\mathbf{X}_{1}\right) \end{gathered}$ | $\begin{aligned} & \hline \text { DPS } \\ & \left(\mathbf{X}_{2}\right) \end{aligned}$ | $\begin{gathered} \mathbf{x}_{1}=\mathbf{X}_{1-}- \\ \overline{\mathbf{x}}_{1} \end{gathered}$ | $\begin{gathered} \mathbf{x}_{2}=\mathbf{X}_{\mathbf{2}^{-}} \\ \overline{\mathbf{x}}_{2} \end{gathered}$ | $\mathbf{x}_{1} \cdot \mathbf{x}_{2}$ | $\mathbf{x}_{1}{ }^{2}$ | $\mathbf{x}_{2}{ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006/07 | 1740 | 15 | 365.8 | -1.136 | -415.55 | 133809.64 | 1.290 |
| 2007/08 | 1980 | 25 | 605.8 | 8.864 | 5369.81 | 366993.64 | 78.570 |
| 2008/09 | 1760 | 12 | 385.8 | -4.136 | -1595.67 | 148841.64 | 17.106 |
| 2009/10 | 816 | 11.84 | -558.2 | -4.296 | 2398.03 | 311587.24 | 18.456 |
| 2010/11 | 575 | 16.84 | -799.2 | 0.704 | -562.64 | 638720.64 | 0.496 |
| $\begin{aligned} & \mathbf{N}_{1}=5 \\ & \mathbf{N}_{2}=5 \end{aligned}$ | $\begin{gathered} \sum X_{1}= \\ 6871 \end{gathered}$ | $\begin{array}{r} \sum X_{2}= \\ \mathbf{8 0 . 6 8} \end{array}$ |  |  | $\sum \mathbf{x}_{1} \cdot \mathbf{x}_{2}=$ <br> 5193.98 | $\begin{gathered} \sum x_{1}{ }^{2}= \\ 1599952.8 \end{gathered}$ | $\begin{aligned} & \sum \mathrm{x}_{2}{ }^{2}= \\ & 115.919 \end{aligned}$ |

Source: Annual Report of sample Bank

For MPS,

$$
\begin{aligned}
& \operatorname{Mean}(\overline{\mathrm{X}})=\frac{\sum \mathrm{X}_{1}}{\mathrm{~N}_{1}} \quad=\frac{6871}{5}=1374.2 \\
& \text { S.D }(\boldsymbol{\sigma})=\sqrt{\frac{\sum\left(\mathrm{X}_{1}-\overline{\mathrm{X}}_{1}\right)^{2}}{\mathrm{~N}_{1}}}=\sqrt{\frac{1599952.8}{5}}=632.447
\end{aligned}
$$

For DPS,

$$
\operatorname{Mean}(\overline{\mathrm{X}})=\frac{\sum \mathrm{X}_{2}}{\mathrm{~N}_{2}} \quad=\frac{80.68}{5}=16.136
$$

S.D $(\boldsymbol{\sigma})=\sqrt{\frac{\sum\left(\mathbf{X}_{2}-\overline{\mathbb{x}}_{2}\right)^{2}}{\mathrm{~N}_{2}}}=\sqrt{\frac{115.915}{5}}=5.39$

Correlation between MPS \& DPS,

$$
\begin{aligned}
\left(r_{12}\right)= & \frac{\sum \mathrm{x}_{1} \mathrm{x}_{2}}{\sqrt{\sum \mathrm{x}_{1}{ }^{2} \sum \mathrm{x}_{2}{ }^{2}}} \\
& =\frac{5193.98}{\sqrt{1599952.8 \times 115.919}}=0.3813
\end{aligned}
$$

## Appendix: 5

Calculation of Trend Analysis of EPS of HBL \& NABIL

| Year | $x=p-3$ | $\mathrm{x}^{2}$ | $y_{1}$ <br> (HBL) | $\begin{gathered} y_{2} \\ (\mathrm{NABIL}) \end{gathered}$ | $\mathrm{xy}_{1}$ | $\mathrm{xy}_{2}$ | Trend value EBL $Y c=a+b \mathbf{x}$ | Trend value NABIL $Y c=a+b \mathbf{x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006/07 | -2 | 4 | 60.66 | 137.08 | -121.32 | -274.16 | $\begin{gathered} 52.352+(- \\ 6.294)^{*}(-2)= \\ 64.94 \end{gathered}$ | $\begin{aligned} & 104.172+(16.48 \\ & 7) . *(2)=137.146 \end{aligned}$ |
| 2007/08 | -1 | 1 | 62.74 | 115.86 | -62.74 | -115.86 | $\begin{gathered} 52.352+(- \\ 6.294)^{*}(-1)= \\ 58.64 \end{gathered}$ | $\begin{aligned} & 104.172+(16.48 \\ & 7) . *(1)=120.659 \end{aligned}$ |
| 2008/09 | 0 | 0 | 61.9 | 113.44 | 0 | 0 | $\begin{gathered} 52.352+(- \\ 6.294)^{*}(0)= \\ 52.352 \end{gathered}$ | $\begin{gathered} \text { 104.172+(16.48 } \\ 7) .{ }^{*}=104.172 \end{gathered}$ |
| 2009/10 | 1 | 1 | 31.8 | 83.81 | 31.8 | 83.81 | $\begin{gathered} 52.352+(- \\ 6.294) * 1=46.058 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) . * 1=87.685 \end{gathered}$ |


| 2010/11 | 2 | 4 | 44.66 | 70.67 | 89.32 | 141.34 | $\begin{gathered} 52.352+(- \\ 6.294) * 2=39.764 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) . * 2=71.198 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Excepted year 20068/69 | - | -- | - | - | - |  | $\begin{gathered} 52.352+(- \\ 6.294) * 3=33.47 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) . * 3=54.711 \end{gathered}$ |
| $\begin{gathered} \text { Excepted } \\ \text { year } \\ 20069 / 70 \end{gathered}$ | - | - | - | - | - |  | $\begin{gathered} 52.352+(- \\ 6.294) * 4=27.176 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) . * 4=38.224 \end{gathered}$ |
| Excepted year 20070/71 | - | - | - | - | - |  | $\begin{gathered} 52.352+(- \\ 6.294) * 5=20.882 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) . * 5=21.737 \end{gathered}$ |
| $\begin{aligned} & \text { Excepted } \\ & \text { year } \\ & 20071 / 72 \end{aligned}$ | - | - | - | - | - |  | $\begin{gathered} 52.352+(- \\ 6.294) * 6=14.588 \end{gathered}$ | $\begin{gathered} 104.172+(16.48 \\ 7) .{ }^{*} 6=5.25 \end{gathered}$ |
| $\begin{aligned} & \text { Excepted } \\ & \text { year } \\ & 20072 / 73 \end{aligned}$ | - | - | - | - | - |  | $\begin{gathered} 52.352+(- \\ 6.294)^{*} 7=8.294 \end{gathered}$ | $\begin{aligned} & 104.172+(16.48 \\ & 7) . * 7=(11.237) \end{aligned}$ |
| $\sum \mathrm{n}=5$ | - | $\begin{gathered} \sum \mathrm{x}^{2}= \\ 10 \end{gathered}$ | $\begin{gathered} \quad \sum y_{1} \\ =261.76 \end{gathered}$ | $\begin{gathered} \sum \mathrm{y}_{2} \\ =520.86 \end{gathered}$ | $\begin{gathered} \sum \mathrm{x} \cdot \mathrm{y}_{1}= \\ -62.94 \end{gathered}$ | $\begin{aligned} & \sum \mathrm{x} \cdot \mathrm{y}_{2}= \\ & -164.87 \end{aligned}$ |  |  |

Source: Annual Report of sample Bank

## Time Series Analysis (Trend Analysis)

$\mathrm{Yc}=\mathrm{a}+\mathrm{bx}$

Where,
$Y=$ dependent variable
$a=Y$-intercept, $b=$ slope of trend line or annual growth rate,
$\mathrm{X}=$ deviation from some convenient time periods.
Let trend line be
$Y=a+b x$.

Where $\mathrm{x}=\mathrm{X}$ - Middle year

Here,

$$
\begin{aligned}
\mathrm{a} & =\frac{\sum \mathrm{y}}{\sum \mathrm{n}} \\
\mathrm{~b} & =\frac{\sum \mathrm{x} \cdot \mathrm{y}}{\sum \mathrm{x}^{2}}
\end{aligned}
$$

For HBL

$$
a=\frac{261.76}{5}=52.352
$$

For NABIL

$$
a=\frac{520.86}{5}=104.172
$$

For HBL
$b=\frac{-62.94}{10}=-6.294$
For NABIL

$$
b=\frac{-164.87}{10}=-16.487
$$

## Appendix: 6

Calculation of Trend Analysis of MPS of HBL \& NABIL

| Year | $x=p-3$ | $\mathrm{x}^{2}$ | $\begin{gathered} y_{1} \\ (H B L) \end{gathered}$ | $y_{2}$ <br> (NABIL) | $\mathrm{xy}_{1}$ | $\mathrm{xy}{ }_{2}$ | Trend value EBL $Y C=\mathbf{a}+\mathbf{b x}$ | Trend value NABIL $Y C=\mathbf{a}+\mathbf{b} \mathbf{x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006/07 | -2 | 4 | 1740 | 5050 | -3480 | -10100 | $\begin{gathered} 1374.2+(349.4)^{*}( \\ 2)=2073 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ (2)=5869.4 \end{gathered}$ |
| 2007/08 | -1 | 1 | 1980 | 5275 | -1980 | -5275 | $\begin{gathered} 1374.2+(349.4)^{*}( \\ 1)=1723.6 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ (1)=4820.7 \end{gathered}$ |
| 2008/09 | 0 | 0 | 1760 | 4899 | 0 | 0 | $\begin{gathered} 1374.2+(349.4) * 0 \\ =1374.2 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ 0=3772 \end{gathered}$ |
| 2009/10 | 1 | 1 | 816 | 2384 | 816 | 2384 | $\begin{gathered} 1374.2+(349.4) * 1 \\ =1024.8 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ 1=2723.3 \end{gathered}$ |
| 2010/11 | 2 | 4 | 575 | 1252 | 1150 | 2504 | $\begin{gathered} 1374.2+(349.4) * 2 \\ =675.4 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ 2=1674.6 \end{gathered}$ |
| Excepted year 20068/69 | - | -- | - | - | - |  | $\begin{gathered} 1374.2+(349.4) * 3 \\ =326 \end{gathered}$ | $\begin{gathered} 3772+(1048.7) . * \\ 3=137.146 \end{gathered}$ |


| Excepted <br> year <br> $20069 / 70$ | - | - | - |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Source: Annual Report of sample Bank

## Time Series Analysis (Trend Analysis)

$Y c=a+b x$

Where,
$Y=$ dependent variable
$a=Y$-intercept, $b=$ slope of trend line or annual growth rate,
$\mathrm{X}=$ deviation from some convenient time periods.
Let trend line be
$Y=a+b x$.
(I)

Where $\mathrm{x}=\mathrm{X}$ - Middle year

Here,

$$
\mathrm{a}=\frac{\sum \mathrm{y}}{\sum \mathrm{n}}
$$

$$
\mathrm{b}=\frac{\sum \mathrm{x} \cdot \mathrm{y}}{\sum \mathrm{x}^{2}}
$$

For HBL

$$
a=\frac{6871}{5} \quad=1374.2
$$

For NABIL

$$
\mathrm{a}=\frac{18860}{5} \quad=3772
$$

For HBL

$$
b=\frac{-3494}{10}=-349.4
$$

For NABIL
$\mathrm{b}=\frac{-10487}{10}=-1048.7$

