Chapter: One
Introduction

1.1 Background of the Study

Dividend decision is one of the most important decisions of the firm because it affects the financial structure, the flow of funds, corporate liquidity and investor's attitudes. Dividend decision of the firm is a very crucial area of financial management. The main aspect of the dividend policy is to determine the amount of earnings to be distributed to the shareholders and the amount to be retained in the firm. When a company pays out a portion of its earnings to shareholders in the firm of dividend the shareholders may be benefited directly. If the firm retains the funds to exploit other growth opportunities the shareholders can expert to benefit indirectly through future increase in price of the stock. Thus, shareholders wealth can be increased through either dividend or capital gains. The policy of a company on the division of its profit between distribution to shareholders as dividend and retention is known as dividend policy. Dividend is distributed in the form of cash. If the firms needed liquid assets at that time company nay distribute bonus share to the shareholders instead of cash. By doing so, company need not headache to raise a funds in urgent. That's why dividend plays a vital role while performing financial decision.

Dividends are payments made by a company to its share holders. When a company earns a profit, that money can be put to two uses: it can either be re-invested in the business which is called retained earning, or it can be paid to the shareholders of the company as a dividend. Paying dividends is not an expense; rather it is division of an asset among shareholders. Many companies retain a portion of their earnings and pay the remainder as a dividend. Publicly traded companies usually pay dividend on a fixed schedule, but may declare a dividend at any time, sometimes called a special dividend to distinguish it from a regular one.

Dividends are in a various forms; which are cash dividend, stock dividend, stock split dividend, property dividend and bond dividend. In Nepal, cash and stock dividend are in used. There is no similar way to distribute dividend, usually, dividend are paid on monthly, quarterly, semi-annually and annually basis. But, in Nepal, dividend is paid in annually basis. The standard pay out ratio of dividend is forty percent. So, the management of every organization should be maintaining dividend payout ratio by forty percent.

"By a dividend policy we mean some kind of consistent approach to the distribution versus retention decision rather than making the decision on the purely ad-hoc basis from period to period" (Charles's Gordon, 1972).
"In the decades since Modigliani and Miller (1968) proclaimed that corporate dividend policy was a more detain in the context of their analysis, the air has been filled with debate on the importance of dividends".

The policy of a company on the division of its profit between dividend and retention is known as dividend policy. In dividend policy all aspect of question relating to payment dividend are contained. The wealth maximization objective of the firm is the long run objectives, which can be achieved by maintaining adequate funds for the investment. Likewise financing growth can be considered of the secondary objectives of the dividend

policy. In regard of that the firm should predict the future needs of funds and determine the amount of retained earnings available after paying dividends.

Despite the fact that only few companies is paying dividend. More over some Nepalese company is making practice to distribute stock dividend also, which is in increasing trend in Nepal. It is said that when the firms need to retain a high percentage of earnings, they issue stock dividend so that the shareholders of the firm are content. Managers strongly agree that stock dividend have a positive psychological impact towards investor by receiving them. (Baker and Philips, 1992)

Stock split is another aspect of dividend policy. Practitioners have long contained that the purpose of the stock split is to move a firms' share price in to an "optimal trading range." Specifically investors of small investor of small means are presumably penalized by high stock prices that deny them the economic of buying stock in round lots. Thus stock split is the popular practice of developed capital market.

Higher dividends can directly benefit to shareholders because they reduce the free resources which managers can use sub optimally. Some economist believed that management decides to pay dividend in order to reduce agency cost. (Easterbrook, 984:650-659).

By issuing the dividend Management to be forced to go to the capital markets for additional financing. Each time it attempts to raise fresh capital, its operation are intensely scrutinized by investment, bankers, accountants, and other market professionals. Because these parties have comparative advantages over the bondholders in monitoring the firm's activities, dividend payments accompanied by subsequent new financing may lower monitoring costs and thereby increase firm value (Rao, 1992:466)

This research work will look in to all relevant factors of dividend and dividend policy of commercial banks namely, Nepal Investment Bank Ltd., Everest Bank Ltd. and Laxmi Bank Ltd. All of them are running smoothly and taking them as the sample of the study of this purpose.

1.2 Statement of the Problem

Dividend policy is still controversial area of managerial finance. Controversial result has not been found by various studies done by great financial experts at different time on the dividend policy and practices. Some of those studies concluded as below.

During 1956, J. Linter made an important study of 28 companies regarding the behavioral aspect of dividend policy to dividend policy in the American contest. His study was related to partial adjustment model with respect to dividend patterns of American company.
The major findings of Linter's study are:

- Firms generally think in terms of proportion of earnings to be related to be paid.
- Investment requirements are not considered for modifying the patterns of dividend behavior.
- Firms generally have target payout ratios in view while determining change on dividend per share.

Myron J. Gordon conducted a study about the dividend policy in 1962. He concluded that dividend policy of a firm has an effect to its value of shares of shares even in a situation where the return on investment and required are equal. In his model, he explains that investors give more emphasis to the present dividend than future capital gain.

Professor James E. Walter conducted a study in dividend and stock price in 1966. The main point which he give emphasis to that the internal rate of return and cost of capital are determining factors to retain profit or distribute dividends. As long as the internal rate of return (r) is greater than the market rate (k), the stock price will be enhanced by retention and will vary inversely with dividend payout.

Thus, dividend policy is not a simple enough to understand due to factors affect the dividend policy which may vary according to variety in the context of Individual Corporation.

In the context of commercial banks in Nepal, they have not adopted consistent policy on dividend decision. Firstly, dividend distribution does not match with earnings of commercial banks. Secondly, there is no proper relationship between dividend and quoted market price of shares. Similarly, commercial banks with lower return record stable share price and vice versa. Thus, return of bank does not reflect the market price of share, ownership pattern, attitude of management, forms of management, government rules and regulations may be the partial causes of such a situation.

Following are the major problem of the present study that has to be identified for the purpose of this study.

- What is the relationship between dividend per share with the market price per share and earning per share with market price per share of commercial banks in Nepal?
- Can commercial banks increase the value of stock by changing dividend policy or payout ratio?
- Are share price affected by dividend per share in the samples banks?
- What is the relationship between financial position of the company and its dividend policy?
- What sorts of dividend policy is being followed by the Nepalese commercial banks?

1.3 Objectives of the Study

The objective of dividend decision is maximizing shareholder's wealth. The practices of the dividend and it's appreciate distribution in the field of the stock market plays a vital role to collect, generate and utilize the invested funds in the most productive and effective manner. The main aim of the study is to evaluate the application of the dividend policy concerning with

- To examine the impact of dividend on share price.
- To analysis the relationship of financial indictor such as DPS, DPR, DY, MVPS.

- To evaluate various aspects of dividend policies and practices of NIBL, EBL and LBL.

1.4 Signification of the Study

The study is expected to fill the research gap and add to the input to financial literature relation to the dividend policy. The finding may be valuable to related bank taken as sample. However, It will be helpful for shareholders in identifying the productive of their investment and recognizing the rationality of their investment decision. Similarly, customers, financial agencies, stockbroker and interest parties may also take benefit in one way or on the other from this study. It is also helpful to the future researcher related this subject by providing important findings and valuable information.

1.5 Limitation of the Study

The Limitation of this study is data, which is dependent on the financial statement published by the concerned banks and Nepal stock exchange indicators. The regression analysis is based on given data. The reliability of statistical tools used in this study and lack of research experience is the main limitation of this study.
Besides that, some how questionnaire are back form the respondents with out giving any answers because of busy time to give the response. Any way, I tried to make this project work better as much as possible.

There are various limited in this study which has existed below:

- This study has chosen only few commercial banks i.e., Nepal Investment Bank Ltd., Everest Bank Ltd. and Nepal Industrial & Commercial Bank Ltd.
- This report is prepared for the partial fulfillment of the requirement for the Degree of Master of Business Study, T.U.
- Five years data have been taken.
- It is mainly focused on secondary data.
- This study is only focused on the dividend policy of selecting commercial banks.
- There is a time and resources constraint in this study.

1.6 Organization of the Study

Since the study carried out different stages and procedures as it needed, as well as the study organized on the following chapters on order to make the study easy to understand.

Chapter I: Introduction

This chapter deals with the subject matter of the study consisting background of the study, statement of the problem, objectives of the study, Significance of the study, Limitation of the study and organization of the study.

Chapter II: Review of Literature

This chapter deals with review of different available literature of the study. Therefore, it includes conceptual framework along with the review of books, journals and annual reports published by banks and other related authorities, review of related articles and studies and previous thesis as well.

Chapter III: Research Methodology

This chapter deals with research methodology including interpret parts research design, population sample, data collection, data analysis tools and limitation of the methodology.

Chapter IV: Data Presentation Analysis and Major Findings

This chapter deals with the presentation and analysis of data. Major findings of the study are also included in this chapter.

Chapter V: Summary, Conclusion and Recommendation

This chapter deals with the summary of the study, conclusion and recommendation of the study whatever finding in the research is included. This is an important part of the study also. By the help of this chapter any one can get the information regarding the concern banks on the concerned topics.

Chapter: Two
Review of Literature

This chapter is basically concerned with review of literature relevant to the dividend policy of commercial banks. Every study is based on past knowledge. The past knowledge or previous studies should not be ignored as it provides foundation to the present study. Therefore this chapter has its own importance in this study.

This part the study is divided in the two sections:

- Conceptual Framework
- Review of related studies

2. 1 Conceptual Framework

Dividend is an amount of the profits that a company pays to people who own shares in the company. Decision of the firms on dividend policy is a crucial area of financial management. The important aspects of dividend policy are to determine how much the amount to be distributed to the common shareholders from the firm's earnings? Or how much the money will be kept in the firms balance? As being the manager of the firm, it should have known.

Dividend is generally paid in cash from firm's profit, which is a periodic payment and distributed to the shareholders in the portion of theirs investment in the share. The company should decide about the dividend through general meeting, which is happening once in a year and declared there from to.

However, the firm should have enough funds to cerate the investment opportunities in order to strike a balance between dividends paid and retain earning. So, a firm needs to adopt an effective and relevant dividend policy. "The dividend policy must be formulated with the basic objectives in mind maximizing the wealth of the firm's owner and providing for the sufficient financing. These objectives are not mutually exclusive but rather interrelated. The shareholders expect higher dividend from the corporation whereas the corporation ensure towards setting a side the funds for maximizing the overall shareholders wealth". (Gitman: 7th edition) However, a wise policy is to maintain a balance by paying the funds that could not be used due to lack of investment opportunities to employ elsewhere.

"Financial management is therefore concerned with the overall corporation mechanism which affects the well-being of stock holders. That well-being can be partially measured by the dividend received but a more accurate measure is the market value of stock". (William, 1973). So stockholders usually think that the dividend yield is less risky than Capital gain.

2.1.1 Forms of Dividend Policy

Though, the fact that the most popular forms of dividend is cash dividend. Firms need to follow various types of dividend in view of the firm's objectives and policies, which they are implemented. In Nepalese context, the types of dividend that corporation follow is

partly matter of attitude of financial director and partly a matter of various circumstance and other financial corporation that bound corporate plans and policies.

Based on the financial suitability of corporation, dividend may be distributed in various forms like cash dividend, stock dividend, scrip dividend, stock repurchase, property dividend and bond dividend.

a. Cash Dividend

While dividend is paid through cash to the stockholder is known as cash dividend. This form is one of the popular forms used by companies. The cash dividend is the amount of net earnings paid as cash to the owners of the firm to their investment. So, while paying dividend the company should have sufficient fund for the distribution of the cash dividend among shareholders. If the firm does not have enough funds itself it should have borrow from any other source. But it may be difficult when company follows a stable dividend policy. Thus, cash planning should be made for coming period to meet the regular dividend payments. The market price of the shares would drop in most cases by distributing the cash dividend. When cash dividend is distributed, it reduces the reserve of the company and it directly affects both the total assets and net worth of the company.

b. Stock Dividend and Stock Split

A stock dividend simply is the payment of additional stock to stockholders. It represents nothing more than a re- capitalization of the company. It is actually the payment of existing owners of the dividend in the form of stock. Although stock dividends don't have a real value, firms pay stock dividend as replacement for supplement to cash dividend.

"In a stock split there is no change in the capital account because it simply involves a bookkeeping transfer form retained earning to the capital stock account". (Weston and Copeland, 1990).

The payment of stock dividend does not change earning neither position of the firm nor ownership of the stockholders is changed. A stock dividend is paid in additional shares of the stock instead of cash and simply involves a book keeping transfer from earning to stock accounts.

c. Script Dividend

Some times the company may have shortage of cash, in such a situation company may issue script dividend or notes of promising to pay dividend with maturity date and disbursement date. If the dividend payment made through script of promising notes instead of cash is known as script dividend. Such dividend may be interest bearing or non-interest bearing. They will pay when current or past earnings are adequate to holding of cash.

d. Stock Repurchase

Stock repurchase is illegal in some of the country but in some of the country it is an alternative form of distribution to shareholder, other than usual dividend payment. There are some cases that the corporate repurchases its share once issued to the public. If a form has some surplus cash (or it can borrow) and the act allows, it may choose to buy back some of its own stock.

A corporation's repurchase of its stock can serve as a tax advantages substitute for dividend payout. Repurchase have the effect of raising share prices so that shareholders can be taxed at the capital gains rate instead of the ordinary dividend rate on cash dividends.

"Nepalese Company Act 1997, Section 47 has prohibited company from purchasing its own shares. It states that no company shall purchase its own shares or supply loans against the security of its own shares." Hence, the concept of share repurchase is not practical on the context of Nepalese Corporations.

e. Bond Dividend

Another aspect of dividend is bond dividend. It is a rare Phenomenon and long term enough to fall the current liability. it is somehow similar to scrip dividend but different between the two is in respect of date and payment. As in scrip dividend, dividend is not paid immediately. That's why issue of bond increases the long-term obligation of the company's current liability.

f. Property Dividend

When a payment is made in the form of assets or property rather than cash is termed as property dividend. It is distributed when assets are considered no longer essential in the operation of the business or in extra ordinary circumstances. Such assets may be Products Company itself or securities of subsidiaries owned by the company.

2.1.2 Theories of Dividend

Some dividend theories have been advanced in financial management. They are relevant or irrelevant in dividend policy. Which are discussed below:

a. Residual Theory of Dividend

The policy concerned to the dividend upon the firm's investment policy. Residual theory of dividend believes that the dividend distributed by a company should be considered residual or left over earnings after making all acceptance investment opportunities. According to this theory, the shareholders are preferred to have dividend only if their remains a more profit of earnings after recovery fixed obligation and other profitable investment opportunities. If the firm has investment opportunities with returns exceeding than the require rate of return of shareholders it will use the earnings to finance the project. If the firm has retained earning leftover after financing all acceptance investment opportunities these earnings then will be distributed to stockholders in the form of cash dividends.

Generally speaking, internally generated funds are comparatively cheaper than the funds obtained from external financing as it involves flotation costs and other financial obligation and risks as a matter of fact, the company should give priority to internally generated funds while it has investment chances. Even the shareholders, the residual claimants allow the retention and reinvestment earnings rather than pay them cut in dividend because it reflects higher opportunities to gain in future. But, the shareholders prefer dividends if the return form the given investment opportunities in that company promise a return that called be obtained by investing elsewhere.

Under a residual dividend policy, the dividend is passive residual and amount left over from earnings after equally investment. If firm has acceptable investment opportunities with higher return if the absent of left over amount the percent of dividend payout is to be zero. Similarly, if the firm has not profitable, then the dividend payout will be 100 percent. If the investment is larger than earnings, then no dividend is paid and to support the investment new shares will be issued. Thus, dividend is viewed mercy as a residual after fulfillment of all needs. The portion of dividend payout will fluctuate from period to period by making support in the amount of acceptable investment opportunities available to the firm. "Although the residual theory of dividend appears to make further analysis of dividend policy unnecessary, it is indeed not clear that dividends are solely a means of disbursing excess funds."(Rao, 1992) "When we treat dividend as strictly a financing decision the payment of cash dividend is a passive residual." (Shrestha, 1986).

In conclusion we can say confidentially that the dividend policy of a company is closely affected by availability of investment opportunities as well as sufficiency of internally generated funds. In Nepal, however, they may not be fully applicable neither from the viewpoint of shareholders emphasizing more dividend payment to make the best use of the retained earnings.

b. Stability Dividend

The most desirable policy of the company concerning to the dividend payment to the shareholders is stability or regularity of dividends. Shareholders also seem generally to favor these policy and value stable dividends higher than the fluctuating ones. Actually, most of the shareholders also prefers getting stable dividends because all things remaining same. Stable dividends have a positive impact on market price of stock. The termed dividend stability refers to the consistency or lack of variability in stream of dividends. It means that a certain minimum amount of dividend is paid out regularly.
Stability of dividends sometimes means regularity in paying some dividend annually, even though the amount of dividend may fluctuate over years, and may not be related with earnings.

These are some reasons to believe that stable dividend policy does lead the higher stock price. First, Investors generally expect to higher dividend value. They are sure of receiving since fluctuating dividends are riskier than stable ones. The same amount of dividend received under a fluctuating dividend policy is likely to have higher discount factor than a stable dividend policy. This means that a company with a stable dividend will have a lower required rate of return or cost of equity capital than one whose dividend fluctuates. Second, many stockholders live on income received in the form of dividend and they will pay premium for a stock with a relatively assumed minimum dollar dividend. Third, from the stand point of both company and its shareholders is that stability of dividend is desirable for the requirement of legal listing. (Brigham& Eugene: 9th Edition).

c. Constant Dividend Per Share

Constant dividend per share means that the dividend can be fixed either in amount or in percentage. According to this form of stable dividend policy a company follows a policy of paying a certain fixed amount as dividend every year. In this policy the fluctuation in earnings would not affect the dividend payment. In fact when a company follows such a dividend policy, it will pay dividend to the shareholders even when it suffers losses. This policy does not imply that the dividend per share or dividend rate will never be increased. When the company produce new level of earnings and expect to maintain it, the annual dividend per share may be increased. If the increase is expected to be temporarily then the annual dividend per share is not changes and remains at the existing level.

d. Constant Pay out Ratio

One type of dividend policy occasionally adopted by firms is the use of constant pay out ratio. Dividend payout ratio calculated by dividing the firms' cash dividend per share by its earning per share. It indicates the percentage change of each rupees earned that is distributed to the owners in the form of cash. With a constant pay out ratio dividend policy, the firm establish that a certain percentage of earning will be paid to owners in each dividend period. The problem with this policy is that the firms' earnings drops or loss occurs in a given period the dividend may be low or even non-existent. Since dividends are often considered an indicator of the firms future condition and status. This type of action may thus adversely affect the firms stock.

e. Low Regular Dividend plus Extra Dividend

This policy is a mix of small regular and extra dividend. The alternative of the combination of a small regular dividend and extra dividend is suitable for those companies whose earnings are widely fluctuating. Those firms should use this policy if there is a fluctuation in earnings. Under this method a firm can regularly pay fixed however small amount of dividend would not have risk of not being able to pay dividend to the shareholders.

"These types of policy enable a company to pay constant amount of dividend regularly with out a default and allows a great deal of flexibility for supplementing the income of shareholders only when the companies' earnings are higher than the usual. With out committing itself to make larger payment as a part of the future fixed dividend."(Pandey, 1999).

2.1.3 Factors Affecting Dividend Policy

Companies are influenced by number of factors while making decision on dividend policy. Those factors are as follows:

a. Legal Rules and Restriction

It is a one of the factors that influence on decision making. The dividend policy of a firm has to evolve with in the legal framework and restriction. The directors are not legally compelled to declare dividends.

The legal rule acts as boundaries within which a company can operate in terms of paying dividends. Acting within these boundaries, a company will have to consider many financial variables and constraints in deciding the amount of earning to be distributed as dividends.

b. Liquidity Position

The payment of dividends means cash out flow. Although a firm may have adequate earnings to declare dividend, it may not have sufficient cash to pay dividends. Thus, the cash position of the firm is an important consideration in paying dividends; the greater the cash position and overall liquidity of a company, the greater will be its ability to pay dividends. A mature company is generally liquid and is able to pay large amount of dividends. It does not have much investment opportunities, nor all the funds tied up in permanent working capital and, therefore, it has a sound cash position. On the other hand, a growing firm faces the problem of liquidity. Even though it makes good profits, it needs funds for its expanding activities and permanent of working capital. Because of the insufficient cash or pressure on liquidity, in case of a growth firm, management may not be able to declare high dividends.

c. Ability of the Company to Borrow

The financial condition or capability of a firm depends on its use of borrowing and interest charges payable. A high degree of financial leverage makes a company quite vulnerable to changes in earning, and also, the financial condition or capability becomes quite difficult to raise funds externally for financing its growth. A highly levered firm is, therefore, expected to retain more to strengthen its equity base. However, a company with steady growing earning and cash flows may follow a high dividend payment policy in spite of high amount of debt in its capital structure.

d. Control

The objective of maintaining control over the company by the existing management group or the body of shareholders can be an important variable in influencing the company's dividend policy. When a company pays large dividends, its cash position is affected. As a result the company will have to issue new share to raise funds to finance its investment programmers. The control of the existing shareholders will be diluted if they do not want or cannot buy additional shares. Under these circumstances, the payment of dividends may be withheld and earnings may be retained to finance the firms' investment opportunities.

e. Investment Opportunities

The dividend policy of a company is greatly influenced by the financial needs of the company. A growing firm's emphasis on retaining its earning rather than paying dividends for its expanding activities. Bur firm having stable earning trend prefer to pay larger portion of its earning as dividends. If earning fluctuates significantly, firm may

retains a larger amount of the profits to make enough money available for investment projects whenever needed.

f. Inflation

This is a constraint that influences the company's decision on paying dividends. Due to inflation, the cost of replacing equipment will increase accordingly. Therefore, the funds generated by depreciation would be inadequate to replace the assets. Hence greater profit retention may be required for the companies in order to make replacement or to maintain the capital in act.

g. Need to Repay Debt

The need for repaying debt is another factor that restricts the company paying dividends. If the firm is going to expand by setting its debt, The Company can either refund the debt at maturity or replacing it with other securities or should make provision to paying off the debt. But if the company decides to refund the debt then the company requires the retention of the earnings.

h. Rate of Assets Expansion

A high rate of assets expansion creates a need to retain funds rather than to pay dividends. The more rapid the rate is growing the greater its needs for financing assets expansion.

i. The Tax Position of Shareholders

The tax position of the shareholder also affects dividend policy. Paying dividend is not only the action of the company but also consider the prudential need of the shareholders.

The tax position of a company's owners greatly influences the desire for dividends. For, example, a company closely hold by a few taxpayers in high income tax brackets is likely to pay relatively low dividend where as the taxpayers with low tax brackets prefer a relatively high dividend payout.

2. 2 Legal Provision Regarding Dividend Payment

IN Nepal "The Company Act 1997" Makes some legal provision for dividend payment. These provisions may be seemed as under:

***Section 2(m)*:** states that bonus share (stock dividend) means share issue on the form of additional shares to stockholders by capitalizing the surplus from the profit or the reserve fund of a company. The term also devotes an increase in the paid up value of the share after capitalizing surplus or reserve.
Section 47: has provided company from purchasing its own share. This section states that no company share purchase its own share and supporting loans against the security of its own shares.
Section 137: bonus share and sub section (1) states that the company must inform the office before issuing bonus share under subsection (1) This may be done only according to a special resolution passed by the general meeting.

Section 140: dividends and subsection of these sections are as follows:
Subsection (1): except in the following circumstances, dividend should be distributed among the shareholders with in 45 days from the date of decision to distribute them.

- In case any law forbids the distribution of dividends.
- In case the right to dividend is disputed.
- In case dividend cannot be distributed with in the time limit mention above owing to circumstances beyond any one's control and without any fault on the part of the company.

Subsection (2): in case dividends are not distributed with in the time limit mentioned in subsection (1), this shall be done by adding increase at the prescribed rate.
Subsection (3): only the person whose name stands registered in the register of existing shareholders at the time of declaring the dividend shall be entitled to it.

The above indicates that Nepalese law prohibits repurchase of stock, which is against the theory of financing the reason for the kind of provision is not known. The above

2. 3 Review of Related Studies

2.3.1 Review of Books

a. Modigliani and Miller's Study

Modigliani and Merton Miller (1961) first pronounced the major argument in 1961, indicating that dividends are irrelevant. This is known as M-M approach, some times called as "Dividend irrelevant Model." They argued that the value of the firm is not determined by the amount of dividend paid rather by the earning power of the project in which the firm invested its money. They claimed that how the firm split its earning between dividends and reinvestment had no direct effect on its value. According to MM theory, the value of firm is independent of its dividend policy.The MM approach is based on the following assumptions:

- The firms operate in perfect capital market in where all investors are rational, getting information without cost and divisible.
- No transaction cost is required. The securities can be purchase or sold with out any commission and brokerage cost.
- No taxes to be paid.
- The firm has a fixed investment policy, which is not subject to change.
- Perfect certainty and risk does not exist.

The MM approach is based on the following assumptions:

Step I

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

$$P_o = \frac{P_1 + D_1}{1 + K_e}$$

Where,

P_o = Market Price at the beginning of the year or at zero the period
P_1 = Market Price at the end of year.
D_1 = Dividend to be received at the end of the period.
K_e = Cost of equity capital.

Step II

Assuming the firm does not required any external financing, The market value of the firms can be computed by multiplying both sides of above equation by n, no of shares outstanding. Then the total value of the firm is:

$$nP_o = \frac{n(D_1 + P_1)}{1+Ke}$$

Step III

If the firm sells its new share (ζn) at the end of the year, at a price. the value of a firm will be zero at a time.

$$nP_0 = \frac{n(D_1+P_1) + \zeta nP_1 - + \zeta nP_1}{1+ Ke}$$

Or

$$nP_0 = \frac{nD_1 + P_1(n+\zeta n) - \zeta nP_1}{1+ Ke}$$

Where,
N = No. of shares at the beginning of the year.
ζn = No. of equity shares at the end of the year.

Step IV

If the firms were to finance all investment either by R/E or by issuing new shares or by both the amount of new share can be calculate in this way.

$\zeta\ n\ P_1 = I - (E - nD_1)$
$\zeta n\ P_1 = I - (E + nD_1)$

Where,
$\zeta nP1$ = The amount obtained from the sale of new share to finance capital budget.
I = Total new investment required
E = Earning of the firm during the period.
nD1 = Total dividend paid.
$E - nD_1$ = Retained earning.

Step V

By substituting the value of $\zeta\ n\ P_1$ from equation of step IV to equation of step III and we get,

$$nP_0 = \frac{nD_1 + P_1 (n+\zeta n) - I + E - n D_1}{1+Ke}$$

Or

$$nP_0 = \frac{(n + +\zeta n) P1 - I + E}{1+Ke}$$

Conclusion MM concluded that dividend policy does not affect the value of the firm.

Limitation of the MM theory:

MM hypothesis is based on simplifying assumption, which are not well founded. Their assumption of capital market is being perfect which is hardly found in practice.
This hypothesis lacks practical relevance in the real world. This suggests that internal financing and external financing are not equivalent. The dividend policy of the firm affects the perception on the shareholders. Hence, They don't remain indifferent between dividends and capital gain. Thus dividend decision cannot be irrelevant but an active variable that influence the wealth of shareholders.

b. Gordon's Study

Gordon's (1962) develops another model relating to the market value of a firm and dividend policy. Under his study, He concluded that there is a direct relationship between the dividend policy of a firm and its market value. He assumes that dividend per share determines the value of shares. According to him, dividend policy of a firm will affect to value when return on investments is equal to the capitalization(r = k). His argument suggests that the investors prefer present dividend than future capital gain. This argument insisted that an increase in dividend pay out ratio leads to increase in the stock prices because investors consider the dividend yield is less risky than the expected capital gain.
Gordon model is based on the following assumptions:

- The firm is an all equity firm.
- Retained earning is only the source of new investment.
- The internal rate of return (r) and cost of capital (k) remain constant.
- No taxes on corporate income.

The retention ratio 'b' once decided upon is constant and thus the growth rate g = br is constant forever.

The discount rate 'b' must be greater than 'g' to get meaningful value.

Based on the above assumption, Gordon has provided formula to determining the market of share. This is symbolically expressed as below:

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

Where,

P = Price of Share.
EPS = Earning Per Share
b = Retention Ratio.
(1-b) = Dividends pay out ratio.
k = Cost of Capital or Capitalization Rate.
br = Growth Rate.

Growth Firm (r > k): Under the growth of share price tends to decline with increase in payout ratio or decrease in retention ratio. High dividend leads to decrease in share price for such a firms the dividends and stock price have negative relationship.

Normal firm (r = k): share price remains constant regardless of changing in dividend policy.

Declining firm (r < k): Share price will rise if the dividend pay out ratio is rise. That means dividend and stocks price are positively correlated in a declining firm.

c. Walter's Study

Professor James E Walter (1966) developed an approach on dividend policy by arguing that the choice of dividend policy affects the value of an enterprise. Upon his model he emphasized that dividend policy can affect the value of share. He has supported that this model is relevant. He too said that the investment policy of a firm couldn't be separated from its dividend policy because both are interrelated, which is opposite to Modigliani and Miller approach.

Walther's model clearly shows the importance of the relationship between the return on firms' investment and internal rate of return, and cost of capital. The required rate of return (k) is determining by the dividend policy. So far the internal rate of return is greater than the cost of capital, stock price will be enhanced by retention and vary inversely with dividend pay out.

This model is based on the following assumptions:

- The firm finances all its investment through retained earnings i.e. it do not require to issue debt or new equity.
- Cost of capital and internal rate of return of a firm is constant.
- Whole earnings are either distributed or reinvestment internally.
- No change in value of EPS and DPS.
- The firm has a perpetual and infinite life.

Based on above assumption, Market price pre share (MPS) is calculated as follows

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

or

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

Where,

P = Market Price per share
Div = Dividend per share
EPS = Earning Per share
R = Internal rate of return
k = Cost of Capital

Walter's view on the optimum dividend pay out ratio can be summarized as follows:

i. Growth firm: (r > k)

Firms having r > k is called growth firm. For such a firm's the relationship between dividends and stock price is negative i.e. due to more dividends, stock price normally decreases. So it is better to retain earnings for such firms. The optimum payout ratio under this firm is zero percentage.

ii. Normal firm: (r = k)

Firms having r = k is called normal firm. Under this type of firms, the dividend policy has no effect on the market value per share. There is no significant affect in the value of share if the firm made to decide for retaining the earnings or distributed the dividends.

iii. Declining firms (r < k)

Less internal rate than cost of capital is called declining firm. This kind of firm does not have profitable opportunities. So it would be better to distribute the earning to the shareholders that they can invest their return to out side market for profit. The MVPS will increase if the payout ratio is increase.

The conclusion is that when the firm is growing dividends have negative relation to stock prices. In the declining firms there is positive relation between stock process and dividends. And in normal firm dividends are irrelevant to stock prices.

d. VAN HORNE AND MCDONALD'S STUDY

Van Horne and Mc Donald (1971) conducted a comprehensive study on dividend policy and new equity financing with the purpose of investigating the combined effect of dividend policy and new equity financing decision on the market value of the firm's common stock. Selecting on two industries they did the investigation and used a cross-section regression model during the year –end 1968 performed the empirical test. The required data were collected from 86 electric utility firms included on the COMPUSTAT utility database and 39 firms in the electric component industries as listed on the COMPUSTAT industrial data tape.

They concluded on their study that electric utility firms in 1968, share value was not adversely affected by new equity financing in the presence of cash dividends, except for these in the highest new issuing group and it made new equity a more costly form of

financing than the retention of earning. They also indicated that the payment of dividend through excessive equity financing reduces share price. However, a significant relationship between new equity financing and its value was not demonstrated for electronics, electronic components industry.
The model tested by them is as follows:

First model was:

$P_0\backslash E_0 = a_0+a_1\ (g) + a_2(D_0/E_0)+ a_3\ (lev)+u$

Where,

P_0/E_0 = Closing market price in 1968 divided by average EPS for 1967 and 1968.
g = Expected growth rate measured by the compound annual rate if growth in assets per share for 1960 through 1968.
D_0/E_0= Dividend pay out, measured by cash dividend in 1968 divided by earning in 1968.
Lev = Financial risk, Measured by interest charges divided by the difference of operating revenues and operating expenses.
U = Error term.

Second model was:

$P_0/E_0=a_0+a_1\ (g)+a_2\ (D_0/E_0)+a_3\ (lev)+a_4\ (F_a)+a_5(F_b)+a_6\ (F_c)+a_7\ (F_d)+u$

Where,

F_a, F_b, F_c,and F_d are dummy variables corresponding to "new issue Ratio" (NIR) groups A through D.

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

$P_0/E_0 = a_0+a_1\ (g) +a_2\ (D_0/E_0)+a_3\ (Lev) +a_4\ (OR)+u$

Where,

Lev = Financial risk, Measured by long term debt plus preferred stock dividend by net worth as of the end of 1968.
OR = Operating risk, Measured by the standard error for the regression of operating earning per share on time for 1960 through 1968, and rest are as in first model above.

e. Robert H.Litzenberger and Krishna Ramesh Wamy Study

"Lizenberger and Ramesh Wamy (1982) found positive relationship between expected before tax returns and dividend yields." They have discoursed than high dividend stocks providing higher expected before tax return than low dividend stocks to off-set that tax effects. However adding default risk premium variable to

the extended capital assets pricing model shows the dividend coefficient is not significant different from zero and concludes the dividend yield measure is likely to be correlated with number of economics the relationship between dividend yields and stock returns by black and schools indicates that sock with high pay out ratio did not provide return significantly different from hose with low pay out ratios. So they, argue the dividend policy does not matter.

f. H.K. Baker and Aaron L. Philips' study

H. K. Baker and Aaron L. Phillips (1992) surveyed Management views on stock dividend. They addressed two major research questions in this survey. First, why do some managers continue to support stock dividends given the apparently limited benefits of these distributions to shareholders? Second, do management views about the issues and motives for stock dividends differ based on the firms trading location, the size of the stock dividend, or the frequency of issuing stock dividends? Their sample contained all firms that paid at least one stock dividend between 1988 and 1990-100 NYSE/ Amex firms and 26 Nasdaq firms. The source of their stock dividend firms was the CRSP Nasdaq and combined NYSE/Amex master files. They had chosen the 1988-90 periods for two reasons. At first, they wanted the study period to span several years to avoid any potential bias of using a single year. Secondly, they wanted a period long enough to provide a large sample size but short enough to ensure getting someone knowledgeable about the firms most recent stock dividend to answer the questionnaire.

The questionnaire they had used in two parts.

Part I contained 15 closed –end question on issues drawn from the finance literature about stock dividends.

Part II contained seven question about stock divided decision and four questions about the respondent's profile.

They had sent a survey questionnaire and a cover letter to the highest-ranking financial officer of each firm in early November 1991. Non-respondents received a follow up survey and another cover letter one month later. Of the initial 312 questionnaires mailed, only 299 questionnaires were delivered. Of these 299 questionnaires, 136 firms completed and returned them, giving a response Rate of 45.6%.

The findings of their survey were as follows:

- Managers strongly agree that stock dividends have a positive psychological impact on investors receiving them.
- Managers believe that stock dividends enable them to express their confidence in the firm's future prospects, suggesting that stock dividends may have some information content.
- The dominant motive for paying stock dividend is to maintain the firm's historical practice.
- Management views on issues and motives about stock dividends differ little based on the firm's trading location or the size of the stock dividends.

g. Richard John Study

Richard John (2004) examines the interaction between dividend signaling, Smoothing and optimal re-Investment. He develops a dividend policy model that considers both an optimal level of dividend (re- Investment at each point in time and optimal smoothing over time.

His model provides both theoretical insights of a firm's financial management tool for dividend policy. Both theoretical and empirical analysis has identical that high dividend provide positive signals of a firm's financial wealth causing an increase in firm value.

In this paper, he fills a gap in the literature by examining the inflation between dividend smoothing, signaling and optimal re- investment.

His model adopts the following steps:

a) He uses the Gordon Growth model to derive the optimal retention ratio and optimal level of dividend as a function of the cost of equally and the expected return on equity each period.
b) Use this data to derive a deterministic time path for dividends net income and firm value.
c) He compares the deterministic time path with a stochastic time path in order to determine the following smoothing policy.

His analysis provides an important managerial tool for dividend policy. His model is:

i. Can a firm always smooth its dividend and yet able to re- invest optimally for future growth? If it unable to do so would it be better to concentrate on optimal re-investment and let dividend fluctuate or smooth dividend and re- investment sub optimally?
ii. How will shocks affect His model?
iii. He has assumed that investors from expectation regarding re-invest, and use dividends to infer current income. How would the smoothing policy be affected if investor instead formed expectation of current income, and used that dividend policy to inter re-investment?

The model shows the firm's optimal dividend and re- investment policy over time. As well as providing theoretic insights in to smoothing policy, His model provides a practical dividend policy tool for management. The model can be developed to analyze the effects of different stochastic process, shocks, and different expectations. Managers are often pressurized by investors to pay out more dividends, or method should provide useful in such situation since it provide a transept analysis of trade-off between dividend and growth.

2.3.2 Review of Major Journals & Articles in Nepalese Perspective

Few studies have been conducted in dividend behavior in Nepal, which is reviewed as follows:

a) Shrestha M. K.'s study

Dr shrestha (1992) has written the book on the topics of "shareholders democracy and annual general meeting feed back" which deals with the polices and financial performance of some financial companies in Nepal. He presented his paper on the occasion of fifth annual general meeting of Nepal Arab Bank Ltd. On his paper, he

opines that shareholders have common views on the problem and constraints of the shareholders, which are as follows:

- õ The cost-push inflation at exorbitant rate has made the shareholders to expect higher from their investment.
- õ Multiple decrease in the purchasing power of the Nepalese currency to the extent that higher return by way of dividend is just a natural economic consequence of it.
- õ Erosion in the purchasing power of the income has made it clear that dividend payment must be directed to enhance shareholder's purchasing power by raising dividend payout ratio on the basis of both earning cost theory.
- õ Indo- Nepal trade and transit deadlock has become a sort of economic welfare-putting rise in the cost of living index to a considerable extent. This is pone of the reasons, which made shareholders to expect higher demand for satisfactory dividend.
- õ The waiting of five years with peanut dividend in previous year is equally a strong enforceable reason of the bank's shareholders to expect handsome dividend already assured and committed in various reports of the earlier annual general meeting.
- õ One way to encourage risk-taking ability and preference is to have proper risk-return trade off by bank's management board in a way that higher return must be the investment rule for higher risk-takers that comprise bank's shareholders.
- õ On behalf of these difficulties, He requested to the bank management board to rethink the matters relation to payment of dividend.

Though, at the end of his paper Dr. Shrestha opines that the bank is trying its best to satisfy both the shareholders and employees. On the Third general meeting of the then Nepal Grindlays Bank ltd a report submitted by Dr. shrestha has shown that the shareholder's thought on bonus payment and shareholder's dividend payment are not found to properly balanced. The bonus of Rs 2.85 million was paid to nearly 50 employees, whereas the dividend Rs. 3.00 million was paid to more than 5000 shareholders, which is less socially justified from income sharing prospective.
The shareholders are satisfied and happy with the excellent financial performance of the bank but the management decision on distribute 10% dividend and then arguing interim dividend of 7.5% to show that shareholders are getting 17.5% dividend doesn't match the expectation of shareholders.

b) Pradhan Radheshyam's Study

Pradhan (1993) has conducted the study on stock market behavior in the year 1992.For this study, he has selected the 17 enterprises and gathered the data from them. His study period was from the year 1986 to 1990.

The objectives of this study were as follows:

- To access the stock market behavior in Nepal.
- To examine the relationship of market equity, market value to book value, price earnings and dividends with liquidity, profitability leverage assets turnover and interest coverage.

Upon his findings in connection with dividend behavior that dividend per share and market per share was positively correlated, higher the earnings on stock larger the ratio of dividend per share to market price per share. The relationship between dividend per

share to market price per share, the relationship between dividend to market share price and interest, the relation between dividend payout and liquidity are positive. ame as Likewise, positive relationship between dividend payout and turnover ratio, dividend payout and interest coverage and more variable for the stock paying higher dividends.

2.3.3 Review of Thesis

Some researches have been conducted by students of MBA on the financial aspect of commercial bank related to dividend policy, which is supposed to be relevant for this study. Therefore, they have been presented here.

- **Bhattarai (1990)** on his research topic "share markets in Nepal" Mr. A.R. Bhattarai (1990) has conducted the research in 1990. In where he did study on dividend policy and made a conclusion, that is given below. Though his Main area was in stock price.Most of the companies has found that they were paying less DPS than the expected of investors. Some of them were paying higher than the average cash DPS and others were paying regular dividend with higher amount was low priced. Taking the whole company, Most were under rating than the expectation of investor thereby the low marketability of shares on the trading floor of stock exchange.

In order to improve the dividend policy, Bhattarai (1992) suggested that the companies should pay proper attention to meet investor's expectation for which the following policies can be followed:

Listed companies should follow the minimum payment dividend policy .ie. they should be bound to a certain minimum amount of dividend every year to the investors. The listed companies should pay regular dividend or should bound to pay fixed rate of dividend every year for which they should compel to maintain a regular cash balance declaring dividend to the stock price.

The companies should pay extra dividends as an interim dividend with regular dividend when the company make a good earnings times.

- **Adhikari (1996)** has conducted a study on corporate dividend practices in Nepal. The specific objectives of his study are as follows: to analyze the properties of portfolio formed on dividends, to examine the relationship between dividends and stock prices. to Survey the opinions of financial executives on corporate dividend practices.

Upon his conclusion, there are differences in financial position of high dividend paying and low dividend paying companies. Other things remain same. Financial position of high dividend paying companies is comparatively better than that of low dividend paying companies. Another interest conclusion of his study is that market price of shares affected by dividends. Finally, financial executives of Nepal reject dividend as a residual decision in Nepalese companies.

- **Gautam (1998)** has conducted a research work on "comparative study on dividend Policy of Nepal Grindlays Bank ltd, Nepal Indosuez Bank ltd and Nepal Arab Bank in 1998. He emphasized the following objectives that to identify to identify the type of dividend followed by the bank, to examine the impact of dividend on share price, to identify the relationship between dividend per share and other financial indicators.

Upon his conclusion, Gautam concluded that sample banks have not clearly defined about the dividend policy. Likewise, the market price of the share does not seem to be more or less dependent on EPS or DPS and no uniformity in earning per share and not significant relationship between dividend per share and other financial indicators.

- **Timilsina (2001)** has performed a research work on "Dividend Policy: A comparative study between Nepal Grind lays Bank Ltd and Nepal Indosuez Bank Ltd. On his work, He analyzed ten years data relating to dividend policy from 1989/90 to 1998/99.

The main objectives of his study are: to highlight dividend practices of the banks, to analysis the relationship of dividend with various important variables such as earning per share, stock price, net profit and net worth, to provide workable suggestion and possible guideline to overcome various issues and gaps based on the finding of the analysis.

Upon his conclusion, the relationship between dividend per share with earning Per share, Net profit, stock price and net worth are positive in these sample banks, a change in dividend per share affects the share price and net worth differently in different banks, change in earning per share and net profit affects dividend per share differently in different banks, there is not uniformity of dividend distribution policy on the sample banks.

- **Bhandari (2001)** has conducted a research on "Dividend Policy: A comparative study between Banks and insurance companies in 2001. The main objective of her study is to find out the appropriate dividend policy and practices in Nepal are; to examine the relationship between dividend and market price of the stock, to identify the appropriate dividend policy followed by the banks and insurance companies, to analyze the relation between dividend policy decision of banks and insurance companies.

Upon Bhandari conclusion, no consistency in dividend payment is found in all the sample institution i.e. NGBL, NIBL, NIC, and EIC. It seems to be paying average DPS and appropriate dividend policy. The institution doesn't seem to follow the optimal dividend policy of paying regular dividend as per the shareholders expectation and interest. This would create uncertainty among the shareholders. The major findings has also lead to conclude the controversy existed in declaring dividend by the companies in the sense that the major factors like the firm have been neglected, ignored and disregarded which must have been considered the most.

- **Dhungel (2004)** on his research topic "Dividend Policy of commercial banks in Nepal" on 2004. The main objectives of his research are: to study whether the commercial banks are following the suitable dividend policy or not, to study whether the dividend policy affects the value of the firm or not, to comparative the dividend policy followed by different commercial banks chosen, to study the relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR, Net worth, Net Profit & book value of share.

Major finding are:

- None of the sample banks are following suitable dividend policy except SCBNL.

- The regressions analysis of DPS on MPS shows that increase in MPs leads to decrease in DPS in all the sample banks except SCBNL.
- There is positive relationship between EPS & MPS in all the banks except in case of SCBNL.
- Change in dividend per share affect the value of share differently in different banks.

➢ **Budhathoki (2006)** carried out a research on "Dividend Policy of the commercial banks in Nepal" on May 2006. The main objectives of her research are: to highest the dividend practices of commercial banks, to highest the dividend practices of commercial banks and to compare the dividend policy followed by different commercial bank chosen.

Upon his conclusion, there is not fixed consistency between financial variable i.e., EPS, MPS, DPS, DPR, P/E Ratio, EY & DY. Dividend practices of all sample banks are neither stable nor constantly growing. Haphazard way of distribution in growing tends in observed. Changes in DPS affect the market price per share differently in different banks.

➢ **Shah (2009)** carried out a research on ''cash dividend practice & its impact on share price in Nepal" It covered five years (2004-2008) including commercial banks, manufacturing companies, development banks, insurance companies, financial institutions and hotels sectors. Its basic objectives were to evaluate the tread of cash dividend forecasting and payment by the Nepalese's financial institution and to see and examine the impact of Cash dividend on market price per share. To achieve these & analyzed by using regression model & hypothesis test. Major finding of his study are as follows: commercial banks of Nepal are seen the regular dividend passing financial institution, in average 90% companies pay less than 50 percent cash dividend. The company having good earning only have been paying regular cash dividend, the lack of financial knowledge and the market in efficiency has affected the market price of the share in all the firms. But it is theoretically argued.

➢ **Maharjan (2010)** has conducted on a study in a topic of "Dividend practices of the Nepalese commercial Banking sector" The study has been carried out with the following objectives: The general objective of the dividend policy should be to maximize the return on the shareholder's equity so that value of investment is maximized. The return on the shareholder's equity, so that value of investment is maximized. The study primarily focuses on the dividend practices & their impact of commercial banking sectors in Nepal. In this regard, special objective of the study are:
- To evaluate overall dividend patterns & commercial Banks in Nepal.
- To analyze the relationship of dividend with key variables in flouncing the dividend policy such as earning per share, net profit, net worth &stock price.
- To investigate Walter's model in the contest of the Nepalese stock market sectors operating in Nepalese stock market. It also indicates that relation between DY and Market value to book value is negatively correlated.
- The study reveals that there is a very high positive correlation between market value to book value ration& market value as well as positive correlation between P/E nation & market value to book value ratio. At the same time, their exits negative correlation between DY & P/E ratio. The major findings of the study are highlighted as follows:

- There exits negative correlation between DPS and DY. The coefficient of correlation of DPS and P/E Ratio indicates moderate negative relationship between these two variables. Increase in one needs to decrease in other variable. The coefficient of correlation between DPS and NP to NW is positively strong correlation.
- In case of normal stage of banks. The dividend payout ratio does not affect the market value of share of normal stage banks. Hence, the model of matter in the case of normal stage of banking sectors is applicable.
- In the case of decline stage banks, theory of Walter is applicable in the case of decline stage banking sector of Nepal.
- The study reveals that there is a very high positive correlation between market value to book value ration and market value as well as positive correlation between P/E ration and market value to book value ration. At the same time, their exits negative correlation between DY and P/E ration.

➢ **Tuladhar (2011)** has conducted a study of divined policy of the commercial banks in Nepal. In taking three commercial Banks. Though data collected from 05/06 - 09/10. The main objectives of her research are: to study whether the commercial banks are following the commercial banks are following the suitable dividend policy or not, to compare the dividend policy followed by different commercial banks chosen, to study the relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR , net worth, net profit & book value of shame, to provide some fruitful suggestion to the sample bank chooses regarding their dividend policy, so that they follow the better policy if the existing policy is not fruitful enough, the relationship between MPS of NIBL with EPs& PE Ratio is positively correlated & relation between DPS & MPS , DPR & MPS & DY & MPS is negative.

2.4 Research Gap

Various research works have been conducted on dividend policy of commercial bank and the comparative study of NIBL, EBL and LBL has not been done so far, so here an effort is made to do the same. Thus, the present study will make a modest attempt to analyze dividend policy; this study has been carried out. This project tried to present the study that has been out to fill then latest dividend policy of commercial banks and future perspective as well. This study will be helpful to understand some aspects of dividend policy of commercial banks of Nepal and provides present scenario of dividend payments. Moreover, this research has tried to find out the projected earning of commercial banks as dividend policy largely depends upon the earnings of the commercial banks.

Chapter: Three
Research Methodology

3.1 Introduction

Research Methodology; describes the methods of process applied in the entire aspect of study. Every research should be outline in the systematic manner and for that reason research methodology is one of the most important parts of every research.

Though, "Research Methodology is a way to systematically solve the research problems. It refers to the various sequential steps to be adopted by a researcher whom is studying a problem with certain objectives." (Kothari, 1978)

The basic objective of this study is to explain, test and analysis of the concerned topic "Dividend Policy". Therefore, some systematic research methodology has been used. This study is basically based on secondary data but some how relevant question might be asked to the concerned bodies.

3.2 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances. (Kerlinger, 1978:300)
The research design basically followed the comparative evaluation of dividend policy in the sample firms and their effect on stock prices. Analytical and descriptive approaches are used to evaluate the dividend policy of the sample firms. The points are discussed basically on the basis of secondary data, financial statement of five years from 2005/06 to 2009/10 taken for commercial banks.
According to Kerlinger, "research design helps the investigator in obtaining answer to the questions of research and in controlling the experimental, extraneous and error variance of the particular research problem under study."

3.3 Nature and Sources of Data

In this study, data will have been gathered from the secondary data. The secondary sources of data are those which are publicly available in beforehand. The required data have been collected from the various sources like Nepal stock exchange Ltd, Annual reports of the concerned banks, NRB indicators, News paper, Magazine, Periodical reports, Management journals, website, previous studies and dissertations etc which are relevant to the concerned topic Dividend policy.

3.4 Population and Sample

There are so many commercial banks established in the country after the restoration of the democracy in Nepal. Most of them are trading in the stock market. Here it is not possible to study all of them. Therefore sampling will be done selecting from population. The populations are as follows:

1. Nepal Bank Ltd.
2. Rastriya Banijya Bank
3. Nabil Bank Ltd.

4. Nepal Investment Bank Ltd.
5. Standard Charted Bank Ltd
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu
11. Nepal credit and commerce bank Ltd.
12. Lumbini Bank Ltd
13. Nepal Industrial and Commercial Bank Ltd.
14. Machhapuchhre Bank Ltd.
15. Kumari Bank Ltd.
16. Laxmi Bank Ltd.
17. Siddhartha Bank Ltd.
18. Global Bank Ltd.
19. Agricultural Bank Ltd.
20. Citizens Bank International Ltd.
21. Prime Commercial Bank Ltd.
22. Bank of Asia Nepal Ltd.
23. Sunrise Bank Ltd.
24. DCBL Bank Ltd.
25. NMB Bank Ltd.
26. Kist Bank Ltd.
27. Janata Bank Nepal Ltd.

The selected samples are as follows:

1. Everest Bank Ltd.
2. Nepal investment Bank Ltd.
3. Laxmi Bank Ltd.

3.5 Data Processing and Analysis

Since the study is based on secondary data, they are collected from the Annual Reports of concerned banks. The collected data are changed in understandable form as objective of study. The collected data are rearranged and entered into appropriate table and graph for easy interpretation of study. Further, the processing and tabulation of data, different and statistical tools are used for interpretation and analysis of study.

3.6 Method of Analysis

To achieve the objective of the study; various financial and statistical tools should be used. The study has been conducted on the basis of data available.

The financial and statistical tools will draw out relationship between different variables related with study topic. The various results will be tabulated under different headings while calculating. Then they are compared to each other to interpret the result. In this study simple regression line is used to analyze the influence of independent variable on a dependent variable. It helps to study the effect and the magnitude of the effect of single independent variable on the dependent variable to determine the DPS. The following regression model has been applied;

Simple regression

$$Y = a + bX_1$$

Where,
Y = Market value per share (MVPS)
a = Intercept
b = reference of change
X_1= Dividend per share

Hence, in obtaining in the regression line, we follow the approach that the sum of the squared deviation minimum and on the basis of worked out values of it contains viz (a) and (b) that is known as intercept and the relation. This has been done with the help of following two normal equations.

$$Y = a + b \quad X$$
$$XY = Na + b \quad X^2$$

Where,
a and b are unknown variable
N = Number of observation in the sample

Similarly, multiple regressions are used to find out the unknown value of one variable by using known value of another variable. It determines the average value of another variable and also average probable change in one variable based on certain amount if change in another. It helps to study the effect and magnitude of the effect of the many independent variables on the dependent variables. To determine whether the market price per share is related to dividend per share and earning per share and for this, multiple regression models have been developed. The model has been formulated as follows:

$$MPS = a + b_1 DPS + b_2 EPS$$

Where,
MPS = Market Price per share
a = Regression Constant
b = Regression coefficient (Slope of the Regression Line)
DPS = Dividend per share
EPS= Earning per share

Hence, a, b1 and b2 variables from the above equations are collected with the help of the following three normal equations:

$$X_1 = Na + b_1 \quad X_2 + b_2 \quad X_3$$
$$X_1X_2 = a \quad X_2 + b_1 \quad X_2^2 + b2 \quad X^2X^3$$
$$X_1X_3 = a \quad X_3 + b_1 \quad X_2X_3 + b_2 \quad X_3^2$$

3.7 Analysis of Data

Having all the information is from the concerned banks, concern groups and relevant data. Thereafter data should be analyzed to know the situations of the concerned organizations. To analyzed the data some necessary tools and methods to be used. So those tools are as follows.

a) Financial Tools
b) Statistical Tools

a) Financial Tools

Financial tools are those that help to study the financial strength and weakness of the sample firms. Those financial tools are as follows.

i. Earning Per Share (EPS)

Earning per share is that which measures the profit available to equity shareholders on per share basis. It calculation will be helpful to know whether the banks earning power per share basis have changed over the period or not. The objective of computing this ratio is to measure the profitability of the firm on per equity share basis. It is calculated by,

$$\text{EPS} = \frac{\text{Net profit after Tax- Preference dividend}}{\text{No. of equity share outstanding}}$$

ii. Dividend Per Share (DPS)

The amount of earning distributed and paid as cash dividend is considered as dividend per share. Higher DPS shows the efficiency of management and vice versa. It is calculated by,

$$\text{DPS} = \frac{\text{Total dividend to ordinary shareholders}}{\text{No. of common ordinary shares outstanding}}$$

iii. Dividend Payout Ratio (DPR):

This ratio measures the relation ship between the earning related equity shareholders and dividend paid to them. It is calculated by,

$$\text{DPR} = \frac{\text{Dividend per share}}{\text{Earning per share}}$$

iv. Price Earning Ratio (P/E ratio)

P/E ratio express the amount currently paid to each rupee of currently reputed by the balance sheet of companies. It is calculated by,

$$\text{P/E ratio} = \frac{\text{Market value per share}}{\text{Earning per share}}$$

v. Market Price Per Share

Market price is that value of stock, which can be obtained from the market. MPS is one of the variables that affects to DPS of the firm. If the EPS and DPS are high, the MVPS will also be high. The capital market determine market price per share. It is calculated by,

$$\text{MPS} = \frac{\text{Market value per share}}{\text{Book value per share}}$$

b) Statistical Tools

Various statistical tools are being used in this study. Which are explained below:

i. Mean ($\overline{X}$)

The arithmetic mean or average is the sum of total value to the number of observation in the sample. It represents the entire data, which lies almost between two extremes. For this reason, an average is frequently referred to as a measure of central tendency. In this study, it is used in data related to dividend of sample companies over different years. it is calculated as:

$$\text{Mean } (\overline{X}) = \frac{\textit{Sum of total values}}{\textit{No. of observations}}$$

ii. Standard Deviation (S.D.)

The standard deviation is an absolute measure of dispersion. The standard deviation is the square root of mean squared deviation from the arithmetic mean and standard deviation is calculated as:

$$S.D.(\pm)\ \mathrm{X} \sqrt{\frac{1 \quad (X\ \mathrm{Z}\, \overline{X})^2}{N}}$$

The standard deviation is widely used to measure dispersion or variability and is measured in units.

iii. Coefficient of Variation (C.V.)

The coefficient of variation reflects the relationship between standard deviation and mean. The relative measure of dispersion based on the standard deviation is known as coefficient of standard deviation. The coefficient of dispersion is based on standard deviation by 100 is known as the C.V. it is used for company variability of two distribution. If the (X) be the arithmetic mean and f± AS.D. be the standard deviation of the distribution. Then the C.V. is defined as:

$$\text{C.V.} = \frac{\sigma}{\overline{\mathrm{X}}} \,|\, 100\%$$

Less the C.V., More will be the uniformity, Consistency and vice versa.

iv. Coefficient of Correlation (r)

Correlation analysis is the statistical tools that can be used to describe the degree to which one variable is linearly related to another.

The coefficient of correlation measures the direction of relationship between tow sets of figures. It is the square root of coefficient of determination. Correlation can either be positive (+ve) or negative (-ve). If both variables are changing in the same direction, the correlation is said to be positive but when the two variables take place in opposite direction, the correlation is termed as negative. In this study, Coefficient of correlation is calculated to examine the positive or negative relationship between the stock price and dividend.

v. Coefficient of Determination (R^2)

The coefficient of determination is a measure of the degree of linear association or correlation between two or more independent variables and dependent variables. In other words, R^2 measures the total variation in dependent variable explained by independent variables. The coefficient of determination can have value ranging between 0 and 1 .If R^2 is equal to 0.75 it indicate that the independent variable explain 75% of the total variation in the dependent variable

vi. Regression Analysis

"The regression analysis is a statistical method for determining the nature of relationship that exists among two or More Variables" (Shrestha: 2048)

The regression analysis helps us to know the relative established the nature of relationship between the two variables and estimates the unknown variables (dependent) on the basis of other known variables.

vii. Regression Constant (a)

The regression constant (a) represents the variable of the dependent variable when the independent variable has a zero value. The value of the constant is the intercept of the model. The constant (a) indicates average effect on dependent variable if the variable is omitted from the model.

viii. Regression Coefficient (b)

The regression coefficient (b) is a parameter, which indicates marginal relationship between independent variable and value of dependent variable holding constant the effect of all other independent variables in the regression model. The coefficient is specific a part of change in the dependent variable regarding part of change in the independent variables.

ix. Standard Error of Estimate (SEE)

The standard deviation is to measurement dispersion about an average such as mean. Like wise, the standard error of estimate measure the dispersion about an average line,

called the average line. The standard error of estimate, on the other hand measures the variability or scatter of the observed value around the multiple regression line.

The standard error of estimate measures the closer ness of estimate derived from the regression equation to actual observed values.

x. F-Test

F-test is used to examine the significance of the difference between more than two sample means at one and the same time. The F –test enables us to test for the significance of the difference between more than two sample means. This technique can be used to conclude whether the regression equation provides significant or not.

Chapter: Four
PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

In this chapter, the relevant data and information on dividend policy of some commercial bank i.e. Nepal investment Bank Ltd, Everest Bank Ltd and Laxmi Bank Ltd are presented and analyzed comparatively. At first, the descriptive analysis of dividend per share, dividend payout ratio, dividend yield and market price of share of the respective sample bank is done which is then followed by the explanatory and hypothetical analysis. With the help of statistical tools mentioned in chapter three some financial indicators of the concerned bank is compared. Finally, the simple and multiple regression analysis of some specific financial measurement is done on the basis of data and presented in tabulated form.

4.2 General Analysis

This general analysis part covers the descriptive comparative analysis of the dividend per share, dividend pay out ratio, dividend yield of NIBL, EBL and LBL respectively.

4.2.1 Dividend Per Share Analysis

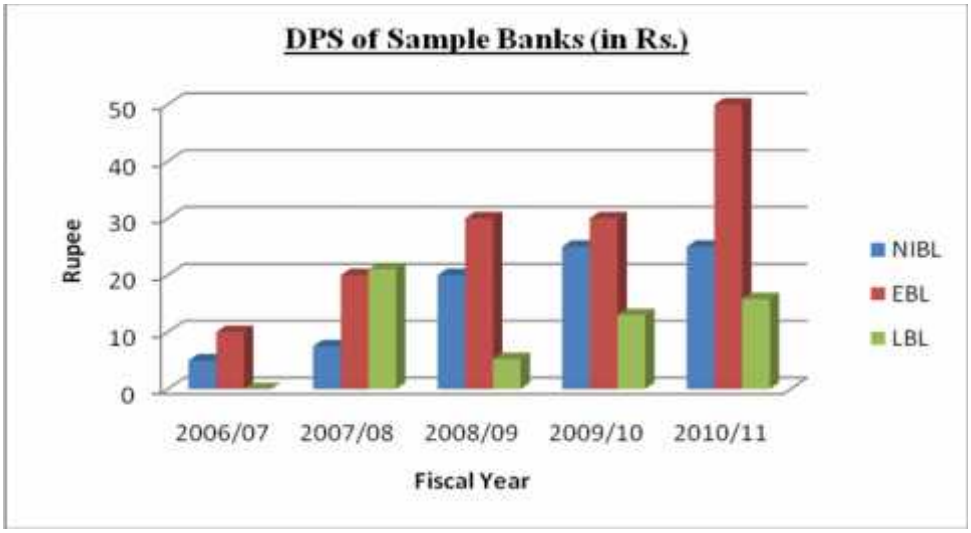
Dividend per share indicates the part of earnings distributed to the common shareholders on per share basis.DPS shows that what exactly the ordinary shareholders receive. It is calculated by dividing the total dividend to equity shareholders by the total number of equity share. The following table shows all the details to dividend per share.

Table No 4.1
Dividend Per Share (DPS) Analysis

Year	NIBL	EBL	LBL
2006/07	5.00	10.00	0.00
2007/08	7.50	20.00	21.05
2008/09	20.00	30.00	5.26
2009/10	25.00	30.00	13.00
2010/11	25.00	50.00	15.79
Average	16.50	28.00	11.02
S. D.	8.60	13.27	7.51
C. V.	52.12	47.39	68.14

Source: Annual Reports of the respective commercial banks

Figure 4.1



The above table 4.1 shows the dividend amount per share distributed to the shareholder by the concerned banks for five years from 2007 to 2011; is mentioning. By analyzing the above mentioned table, we can say that the dividend decisions made by concerned banks are different in years to years. And average dividend paid to the shareholders of the banks to banks is different. EBL is paid highest average DPS i.e. 28 to shareholders whereas NIBL paid 16.5 and LBL paid 11.02 respectively. Thus, average DPS paid by EBL is highest than the average DPS of other banks. It consequently helps to increase the market value of shares and helps to indicate the better performance of the bank's management.

In the year 2006/07 the LBL did not pay cash dividend to the shareholders in lieu of that the bank paid bonus share. It begins to paid dividend from the year 2007/08 to 2010/11. The dividend paid trend was seen fluctuating in year to year. In case of NIBL dividend paid year to year. It is up and down year to year but there is not vast different. In the year 2009/10 and 2010/11 the NIBL paid a constant dividend by 25 percent share to the shareholders. Same as, in the year 2008/09 and 2009/10 the EBL paid a constant dividend by 30 percent share to the shareholders. As seen in the table, the dividend is paid different in different years but the average dividend of the concern bank 28.00 of EBL, 16.50 of NIBL and 11.02 of LBL. From the above fact it seems that NIBL and EBL are regular in providing cash dividends to its shareholders. The S.D. of the NIBL, EBL and LBL are 8.60, 13.27 and 7.51 respectively. It indicates that NIBL has highest degree of risk associated with the DPS than that of other sample banks. By observing the coefficient variation, the LBL has 68.14 percentages, EBL has 47.39 percentages and NIBL has 52.12 percentages respectively which implies that LBL has the high fluctuation on DPS than other banks because of its highest covariance. Hence, with the help of statistical tools we can say that LBL is more fluctuation than other banks.

4.2.2 Dividend Payout Ratio Analysis

Dividend Payout Ratio indicates that what percentage of actual earning of firm is going to be distributed to the shareholders. It depend on earning, greater the earning more ability of the company to pay dividend or more earning means more ability to pay dividend to share holder and vice versa. The comparison of payout ratio reflects the management attitude towards the treatment of profit in respect to distribution of

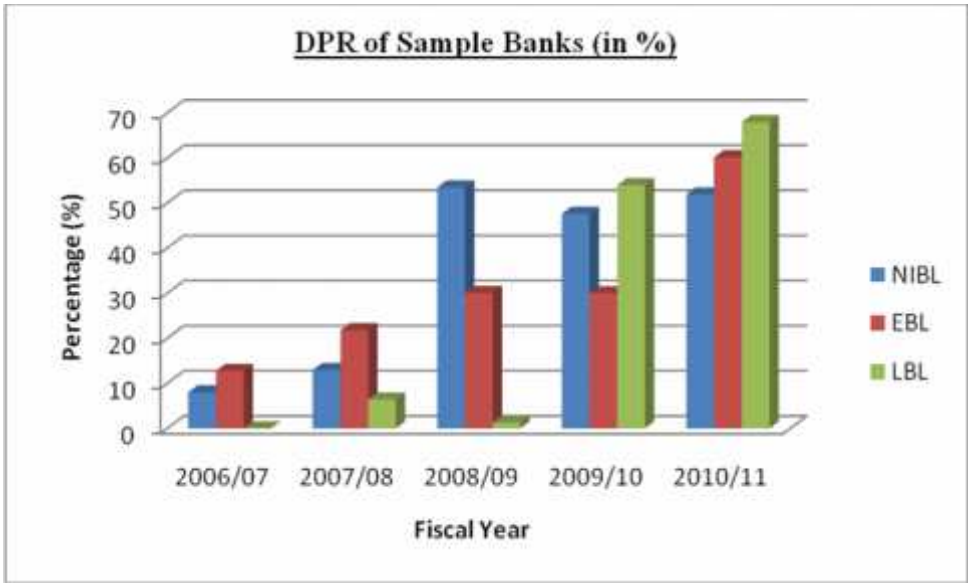
dividend and retained in the organization. It is calculated by dividing DPS to ordinary shareholders by the EPS.

Table 4.2
Dividend Payout Ratio (DPR) Analysis

Year	NIBL	EBL	LBL
2006/07	7.99	12.75	0.00
2007/08	12.96	21.78	6.38
2008/09	53.45	30.00	1.26
2009/10	47.57	29.95	53.90
2010/11	51.88	60.11	67.91
Average	34.77	30.92	25.89
S. D.	19.99	15.92	29.01
C. V.	57.49	51.49	112.10

Source: Annual Reports of the respective commercial banks

Figure 4.2



The above mentioned table no. 4.2 shows the dividends payout ratio of NIBL, EBL and LBL in the year 2006/07 to 2010/11. The main objective of this presentation is to show the percentage of dividend payment out of its earnings. There show that the average dividend payout ratios of the respective banks are 34.77, 30.92 and 25.89 respectively. It shows that NIBL has the highest dividend payout ratio than the other concerned banks. Whereas, LBL has not paid dividend to the shareholders in the years 2006/07 but the same time NIBL has paid 7.99% and EBL has paid 12.75%.

NIBL dividend payout ratio is 7.99%, 12.96%, 53.45% 47.57% and 51.88% 29.95% respectively. In case of EBL bank, its dividend pay out ratio is 12.75%, 21.78%, 30% 29.95 % and 60.11% accordingly. On the remaining year 2007/08, 2008/09, 2009/10 and 2010/11 seems that LBL has paid dividend by 6.38%, 1.26%, 53.90% and 67.91% respectively. The standard deviations of NIBL, EBL and LBL are 19.99, 15.92 and 29.01 respectively. LBL has highest degree of risk associated with the DPR than that of

other sample banks. Similarly, the CV of NIBL, EBL and LBL are 57.49, 51.49 and 112.10. Thus, the analysis of dividend payout ratio trend shows that the LBL ratio to common shareholders is much better than the NIBL and EBL banks.

4.2.3 Dividend Yield Analysis

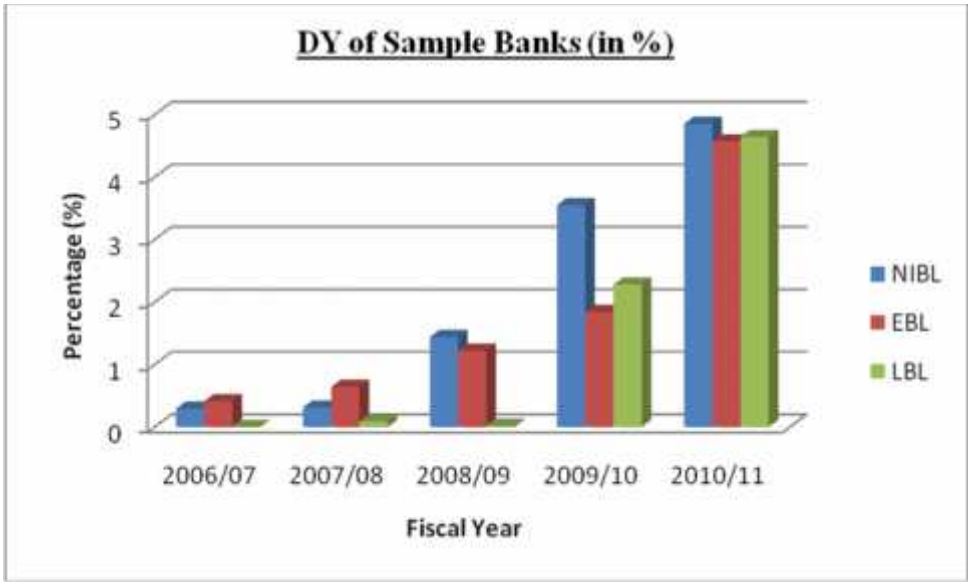
The dividend yield analysis shows the relation between dividend per share and market value per share. Dividend yield ratio highly influences the market value per share because a change in dividend per can bring effective change thee market value of that share.

Table 4.3
Dividend Yield (DY) Analysis (in %)

Year	NIBL	EBL	LBL
2006/07	0.29	0.41	0.00
2007/08	0.31	0.64	0.09
2008/09	1.44	1.22	0.02
2009/10	3.55	1.84	2.28
2010/11	4.85	4.57	4.64
Average	2.09	1.74	1.41
S. D.	1.82	1.50	1.64
C. V.	87.08	86.21	116.70

Source: Annual Reports of the respective commercial banks

Figure 4.3



The above mentioned table no. 4.3 shows the dividend yield of the NIBL, EBL and LBL bank from the year 2006/07 to 2010/11.

A simple change in dividend per share may change the Market value of shares so dividend yield analysis is so much important and should be analyzed carefully. Though,

before allocation of dividend to the shareholders the impact of market scenario and price fluctuation should be studied and evaluated for the long run survival of the bank.

In the year 2006/07 and 2007/08, the dividend yield of NIBL 0.29% and EBL 0.41% respectively. On the other hand, LBL did not paid dividend to their shareholders and no dividend yield at that year. NIBL has highest dividend yield ration in the fiscal year 2010/11. Average dividend yield ratio of NIBL, LBL and LBL are 2.09, 1.74 and 1.41 respectively. It seems that the NIBL has the highest dividend yield of 2.09%. The average standard deviations of the concerned banks are 1.82 of NIBL, 1.50 of EBL and 1.64 of LBL respectively. The calculation of coefficient of variation shows that the highest variation dividend yield is 116.70% of LBL. The coefficient of variation (CV) of EBL shows the most consistent i.e. 86.21%, NIBL has 87.08% & LBL has 116.70 respectively.

4.3 Correlation Analysis

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be related or linked with the change in the other variables. It is used to determine the relationship exists or not, whether the relationship is significant or not, to establish case and effect relation if any. Here correlation analysis is used for identify relationship between DPS and other relevant financial indicators; like EPS, MPS etc.

4.3.1 Correlation between Dividend Per Share (DPS) and Earning Per Share (EPS)

Table No 4.4
Correlation between DPS & EPS

Banks	Co-efficient of correlation (r)	Relationship	Coefficient of determination (R^2)	Probable Error (P.E.)	Remarks
NIBL	0.2509	Positive	0.0629	0.2827	Insignificant
EBL	0.1446	Positive	0.0209	0.2953	Insignificant
LBL	0.7623	Positive	0.5812	0.1263	Significant

The above table 4.4 depicts the relation between DPS and EPS of the three commercial banks during the year 2006/07 to 2010/11. Coefficient of correlation (r) shows the relation between DPS and EPS of NIBL, EBL and LBL which results are 0.2509, 0.1446 and 0.7623 respectively. The relationship between the sample banks is remarkable although, the figures alone are insufficient to depict the significant the relationship. Coefficient of Correlation (r) between DPS and EPS of three sample banks are positively correlated which indicate that the commercial bank's dividend decision largely depends upon earning of the banks.

The coefficient of determination (R^2) is the square of the correlation coefficient and it measures the extent of association between the two variables. Coefficient of determination between DPS & EPS of NIBL, EBL and LBL are 0.0629, 0.0209 and

0.5812 respectively. It means that the variation in the independent explains 6.29%, 2.09% and 58.12% in dependent variable DPS.

To measure the significance of the relationship between DPS & EPS of the three concerned commercial Banks it would be more preferable to calculate probable error (P.E.) of correlation coefficient. The table depicts the coefficient correlation (r) LBL is greater than the P.E. The relation between DPS and EPS obliviously is significant. In case of NIBL and EBL have the value of coefficient correlation (r) is lesser than the probable error P.E. So it means insignificant relationship. Now it can be concluded that the significant relationship reveals the DPS is more dependent on its earnings if DPS increases dividend also increases in the same way.

4.3.2 Correlation between Dividend Yield (DY) and Earning Yield (EY)

Table no 4.5
Correlation between DY & EY

Bank	Coefficient of correlation (r)	Relationship	Coefficient of determination (R^2)	Probable Error (P.E.)	Remarks
NIBL	0.9282	Positive	0.8616	0.0417	Significant
EBL	0.9333	Positive	0.8710	0.0389	Significant
LBL	0.9918	Positive	0.9841	0.0010	Significant

The above table 4.5 shows the relationship between Dividend Yield (DY) and Earning Yield (EY) of three commercial banks. The coefficient of correlation between DY and EY of NIBL, EBL and LBL banks are 0.9282, 0.9333 and 0.9918 respectively. It indicates that the coefficient correlation (r) between DY and EY of three commercial banks are positive correlation. Similarly, the coefficient of determination (R^2) is 0.8616, 0.8710 and 0.9841 respectively. Among which LBL bank has relatively high degree of coefficient of determination by 98.41% in dependent variable. It indicates that the variation in the independent variation EY explain 99.18% in dependent variable. Since coefficient of correlation is greater than P.E. In case of LBL, have significant relationship. The significant relationship shows dividend yield is more dependent over earning yield of the respected company.

Hence, it is safe to conclude that relationship between DY and EY of the three concern banks are significant relationship because coefficient correlation (r) is greater than Probable Error P.E.

4.3.3 Correlation between Dividend Per Share (DPS) and Market Price of Share (MPS)

Table No 4.6
Correlation between DPS & MPS

Bank	Co-efficient of correlation (r)	Relationship	Coefficient of determination (R^2)	Probable Error (P.E.)	Remarks
NIBL	-0.8838	Negative	0.7811	0.0660	Insignificant
EBL	-0.7762	Negative	0.6025	0.1199	Insignificant
LBL	-0.8369	Negative	0.7004	0.0904	Insignificant

The table depicts the relationship between dividend per share (DPS) and market price of share (MPS). The correlation coefficient of NIBL, EBL and LBL are -0.8838, -0.7762 and -0.8369 respectively. The coefficient of correlation between DPS and MPS are low and negative the three concerned banks. The coefficient of determination (R^2) of NIBL, EBL & LBL have 78.11%, 11.99% and 9.04% respectively.

To measure the significant of the relationship between DPS and MPS of the three concerned banks it would be more preferable error (P.E.) of correlation coefficient. The table depicts the coefficient correlation (r) of the three banks are lesser than the P.E., so the there are no evidence of correlation between DPS and MPS which means obviously is insignificant.

4.4 Regression Analysis

The regression analysis is the technique of studying how the variation in one series is related to variations in another series. Using the relationship between a known variable and an unknown variable to estimate the unknown one is termed regression analysis. It is here used to determine the statistical relationship between two or more variable and to make prediction of one variable on the basis of others. The regression analysis can either be simple regression or multiple regressions. When we take one independent variable through the appropriate regression time then it is called simple regression analysis. However, the analysis performed by the use of two or more independent variables is known as multiple regression analysis. The simple regression analysis is performed for the individual sample bank whereas the multiple regression analysis is performed in these studies. Multiple regression analysis is used here to determine the results as dependent variable MPS on EPS, DPS.

4.4.1 Dependent variable Dividend Price Per share (DPS) on Earning Per share (EPS)

When the simple regression model having one independent variable is run, the results are obtained in table no. 4.7. It presents the usual linear relationship between DPS and MPS.

Table No. 4.7

Simple Regression Analysis between DPS on EPS
Regression Equation: DPS= a + b EPS

Banks	Sample size	Regression coefficient			R^2	SEE
		a	b	SE_b		
NIBL	5	51.2965	-0.6711	0.0420	0.4196	13.00
EBL	5	8.0429	0.219	0.083	0.0209	28.0423
LBL	5	-14.36	1.0665	0.0415	0.5809	5.6771

Note: - DPS and EPS represent dividend per sharer and earning per share.

The above table is the collection of major out put of simple regression analysis between EPS independent variable and DPS dependent variable of concerned commercial banks.

As far as the regression of DPS and EPS is concerned, the regression beta coefficient of NIBL EBL and LBL are positive i.e. 0.0941, 0.219 and 1.0486 respectively and indicate these one rupee increase in both banks EPS leads to average Rs. 0.94, Rs. 0.22 and Rs. 1.05 increase in dividend per share keeping other variable remain constant. Coefficient of determination R^2 of all banks is 0.629 of NIBL, 0.0209 of EBL and 0.5712 of LBL respectively. The highest R^2 of NIBL i.e. 0.6296 which indicates that variation in the independent variables EPS explains 62.96% of variation in DPS.

The value of constant (a) of concerned banks is 11.6209 of NIBL, 8.0429 of EBL and -13.9867 of LBL respectively.

4.4.2 Dependent variable Market price per share (MPS) on Dividend per share (DPS)

The next concerning of this study is to know the relationship between MPS on DPS. Therefore, MPS being dependent and DPS is being independent.

Table No: 4.8
Simple Regression Analysis between MPS on DPS
Regression Equation: MPS= a+ b DPS

Banks	Sample size	Regression coefficient			R2	SEE
		a	b	SE_b		
NIBL	5	2548.37	-72.1770	12.2239	0.1880	1262.457
EBL	5	3311.32	-41.5432	5.7824	0.6024	1295.5409
LBL	5	969.7936	-35.6801	14.80	0.1203	691.0296

Note: - MPS and DPS represent market price per share and dividend per share.

The above table 4.8 depicts the major output of simple regression analysis between DPS. As far as the regression of MPS and DPS is concerned, the regression beta coefficients of EBL and LBL are negative. Regression coefficient of NIBL, EBL and LBL are 24.14, -41.54 and -35.68 respectively. Those of indicate that one rupee increases in dividend

per share leads to increase of Rs.24.14 and decreases Rs.41.54 and Rs.35.68 in stock prices of NIBL, EBL & LBL respectively. The constant (a) of NIBL, EBL and LBL are -68.1764, 3311.32 and 969.7936 respectively.

The value of coefficient of determinants R^2 is 0.2674, 0.6024 and 0.4191 respectively accordingly to the respected banks. Among them EBL has relatively high and it indicates that variation in the independent variable MPS explain 60.24% of the Dependent variable DPS.

4.5 Major Findings

- The average dividend per share of LBL is not satisfactory because it paid least amount of dividend to the shareholders. Which is as follow; Rs 11.02 of LBL. Whereas, average DPS of NIBL and EBL are Rs 16.50 and Rs 28.00 and satisfactory as compared to sample banks. Moreover, LBL did not announce the dividend in the year 2006/07. It tells that obviously it is not good sign for the cash oriented shareholders. With that reason the concerned bank average DPS is seen lower than other sample banks. The analysis of coefficient of variation shows that the greater fluctuation in DPS of LBL has 68.14%. NIBL has 52.12% but in case of EBL, It has least fluctuation in DPS by 47.39%.

- The analysis of dividend payout ratio shows that the average dividend payout ratio of NIBL is highest than EBL and LBL (i.e., 30.92 and 25.89). it reflects in average, that NIBL has paid 34.77%, EBL has paid 30.92% and LBL has paid 25.89% dividend their shareholders out of their earnings. It shows that the three sample banks applied aggressive dividend policy. The standard deviations are 19.99, 15.92 and 29.01 of NIBL, EBL and LBL respectively. The coefficient of variation of LBL is 112.10%, it shows 112.10% fluctuation in dividend payout ratio of that bank. The CV of NIBL is 57.49% and EBL is 51.49%. A higher CV indicates that the greater inconsistency in those variables.

- On behalf of the Dividend yield analysis; the respective banks DY is like this; 2.09 of NIBL, 1.74 of EBL and 1.41 of LBL. Among them, NIBL bank has the highest DY. So it is better than others banks on the distribution of dividend on the basis of market price per share.

- The correlation between dividend per share and earning per share of samples banks are different in bank to bank. Coefficient of correlation (r) between DPS and EPS of NIBL, EBL and LBL are 0.2509, 0.1446 and 0.7623 respectively. Coefficient of determination of NIBL, EBL and LBL are 0.0629, 0.0209 and 0.5812 respectively. Here, LBL has statically significance relationship between DPS and EPS since the value of coefficient of correlation is higher than the value of probable error (P.E.).

- The correlation between dividend Yield and Earning Yield of three concerned banks are different in bank to bank. All three banks NIBL, EBL and LBL have positive relationship i.e. 0.0982, 0.9333 and 0.9918 respectively. Coefficient of determination of NIBL, EBL and LBL are 0.8616, 0.8710 and 0.9841 respectively. The three sample banks have statically significance relationship between DY and EY since the value of coefficient of correlation is higher than the value of probable error (P.E.).

- The coefficient of correlation between dividend per share and market price of share of NIBL, EBL and LBL are negatives i.e. -0.88.38, -0.7762 and -0.8369. It is insignificant. Coefficients of determination of the concerned banks are 0.7811, 0.6025 and 0.7004 respectively. The three of the concerned banks have statically insignificant relationship between DPS and MPS since the value of coefficient of correlation less than the value of probable error (P.E.).

- The simple regression analysis of dividend per share on earning per share is that, NIBL beta coefficient -0.6711 indicates that one rupee increase in earning per share leads to the average about Rs. 0.67 decrease in dividend per share holding other variables constant. EBL beta coefficient 0.219 indicates that one rupee decrease in earning per share leads to the average about Rs. 0.22 increase in dividend per share holding other variables constant. LBL beta coefficient 1.0665 indicates that one rupee increase in earning per share leads to the average about Rs. 1.07 increase in dividend per share holding other variables constant.

- The simple regression analysis of market price per share on dividend per share is that, NIBL beta coefficient -72.1770 indicates that one rupee increase in dividend per share leads to the average about Rs. 72.18 decrease in market price per share holding other variables constant. EBL beta coefficient -41.5432 indicates that one rupee increase in dividend per share leads to the average about Rs. 41.54 decrease in market price per share holding other variables constant. LBL beta coefficient -35.6801 indicates that one rupee increase in market price per share leads to the average about Rs. 35.68 decrease in dividend per share holding other variables constant. The value of coefficient of determinants R^2 is 0.1880, 0.6024 and 0.1203 respectively accordingly to the respected banks. Among them EBL has relatively high and it indicates that variation in the independent variable MPS explain 60.24% of the Dependent variable DPS.

4.6 Issues and Gaps

The major issues related to dividend and other relevant factors found that wile analyzing the variable are also presented.

- Lack of proper legal rules that binds companies to pay dividend while they are running at profit is the major problem. The company does not have any clear policy toward dividend decision. Even though, Nepal Company Act –1997 is silent on behalf of dividend distribution.
- The dividend policy adopted by the concerned banks is not stable. Only few dividends are paid without considering risk free rate of return.
- There are lots of inconsistencies on the dividend policy followed by the commercial banks.

Chapter: Five

SUMMARY AND CONCLUSION

This chapter includes three aspects of the study. First aspect of the study focuses on summarizing the fact findings, second aspects of the study emphasizes to make concluding remarks upon them and the third aspect of the study focuses on making some useful suggestions and recommendations based on findings of the study.

5.1 Summary

Dividend serves as a simple comprehensive signal of management's interpretation of the firm's recent performance and its future prospects. Dividend refers to that portion of firm's net earnings, which are paid out to the shareholder in return of their investment. Paying dividend to the shareholders is an effective way to attract new investors to invest of their hard money in the share.

While completing this research work, all the things have been categorized in five chapters. In the first chapter, brief introduction of this study have been presented. In the second chapter, the available literatures from various sources related to dividend policy have been collected and reviewed. In the third chapter, Research Methodology is used to simplify the work. In the fourth chapter, the available data i.e. secondary data and primary data are presented and analyzed accordingly. In the final chapter, an attempt has been made to present summary, major findings, conclusion and recommendation.

After the restoration of democracy in Nepal, Numbers of financial institution have been established i.e. banks and finance companies and so on others. Among them, I choose four commercial banks namely NIBL, EBL & LBL are selected for the study of dividend practice followed by these banks.

The main objectives of this study are: i) to examine the impact of dividend on share price, ii) to analysis the relationship of financial indictor such as DPS, DPR, DY, MVPS and iii) to evaluate various aspects of dividend policies and practices of NIBL, EBL and LBL.

Nepal is stepping over the development of financial sectors. Due to lack of sufficient rules and regulation it is very hard to control the financial institution. So that Banks to Banks are adopting different dividend policy. No commercial banks have satisfactory results about the dividend decision. In practice, every firm has followed own types of dividend policy and policy is being made in their favor. The relationship between dividend and market price per share should be like the nail and meat. But the relation is not found well because of under developed capital market like Nepal.

In Nepal, only few companies are paying dividend to the shareholders. Commercial banks with sound profit have been distributed dividend but they are not following appropriate policy and not paying the dividend in equal proportion. They have not followed the consistency in dividend distribution policy and we could not see a uniformity of dividend pay out ratio in these sample banks.

5.2 Conclusion

This topic related to dividend and other relevant factors found while analyzing the variables are e also presented here.

- Government does not have any clear policy towards dividend and to improve the efficiency of the companies. The number of companies can not earn enough profit and bureaucrats accused the cause of inefficiency to managers which is not sound.

- The above-mentioned major findings led this study to conclude that even if the samples banks have got sound profits they are not paying dividends regularly and constantly. Some samples banks are paying higher dividends and some are paying lower dividend. Due to this fact we can say that samples banks dividend per share and others variables have been highly fluctuated.

- Another conclusion is that the market price of share is affected by dividend. Indeed, the samples banks have not clearly defined dividend policy.

5.3 Recommendation

Base on the major findings of the study of dividend policy of commercial banks in Nepal. Some important suggestions have been recommended in the part.

- The corporation should follow the optimal and long-term dividend policy in order to meet the expectation and interest of the shareholders.

- The board of directors is the ones to decide dividend payment. The decision once made should not be manipulated or influenced by the out come of the annual general meetings.

- The company should try to remove the inconsistencies of the dividend decision.

- Each and every company should provide the information regarding their activities and performances so that investors can analyze the situation and invest their money in the best company.

- The legal rules and regulations must be in favor of investors to excise the dividend practice and to protect the shareholders rights.

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Appendix 1

(A) NEPAL INVESTMENT BANK LIMITED (NIBL)					
Fiscal Years	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Dividend Per share (DPS)	5.00	7.50	20.00	25.00	25.00
Earning Per (EPS)	62.57	57.87	37.42	52.55	48.84
Market Price Per Share (MPS)	1729.00	2450.00	1388.00	705.00	515.00
Dividend Yield (DY)	0.29	0.31	1.44	3.55	4.84
Earning Yield (EY)	3.62	3.62	1.98	7.45	9.48
Dividend Payout Ratio (DPR)	7.99	12.96	53.45	47.57	51.88

(B) Everest BANK LIMITED (NIBL)					
Fiscal Years	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Dividend Per share (DPS)	10.00	20.00	30.00	30.00	50.00
Earning Per (EPS)	78.42	91.82	99.99	100.16	83.18
Market Price Per Share (MPS)	2430.00	3132.00	2455.00	1630.00	1094.00
Dividend Yield (DY)	0.41	0.64	1.22	1.84	4.57
Earning Yield (EY)	0.64	2.93	4.07	6.14	7.60
Dividend Payout Ratio (DPR)	12.75	21.78	30.00	29.95	60.11

(C) LAXMI BANK LIMITED (NIBL)					
Fiscal Years	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Dividend Per share (DPS)	0.00	1.05	0.26	13.00	15.79
Earning Per (EPS)	10.75	16.45	20.70	24.12	23.25
Market Price Per Share (MPS)	690.00	1113.00	1062.00	570.00	340.00
Dividend Yield (DY)	0.00	0.09	0.02	2.28	4.64
Earning Yield (EY)	1.56	1.48	1.95	4.23	6.84
Dividend Payout Ratio (DPR)	0.00	6.38	1.26	53.90	67.91

Appendix 2

1) Average, Standard Deviation and Coefficient of Variation of Dividend Per Share (DPS)

(A) Nepal Investment Bank Ltd.

F/Y	X	$(X - \bar{X})^2$
2006/07	5	132.25
2007/08	7.5	81
2008/09	20	12.25
2009/10	25	72.25
2010/11	25	72.25
n= 5	$\bar{X}$ X82.50	$(X - \bar{X})^2$ X370

Note:

Value of X represents dividend per share.

Average $(\bar{X})$ X $\frac{\phi x}{n}$

= 16.50

Standard Deviation ± X $\sqrt{\frac{(X - \bar{X})^2}{n}}$

=8.60

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

=52.12

(B) Everest Bank Ltd.

F/Y	X	$(X - \bar{X})^2$
2006/07	10	324
2007/08	20	64
2008/09	30	4
2009/10	30	4
2010/11	50	484
n= 5	$\bar{X}$ X140	$(X - \bar{X})^2$ X880

Note:

Value of X represents dividend per share.

Average $(\bar{X})$ X $\frac{\phi x}{n}$

= 28.00

Standard Deviation ± X $\sqrt{\frac{(X \text{ Z} \bar{X})^2}{n}}$

= 13.27

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 47.39

(C) <u>Laxmi Bank Ltd.</u>

F/Y	X	$(X \text{ Z} \bar{X})^2$
2006/07	0	12144
2007/08	0	100.60
2008/09	21.05	33.18
2009/10	5.26	3.92
2010/11	15.79	22.75
n= 5	X X55.10	$(X \text{ Z} \bar{X})^2$ X281.89

Note:

Value of X represents dividend per share.

Average $(\bar{X})$ X $\frac{\phi x}{n}$

= 11.02

Standard Deviation ± X $\sqrt{\frac{(X \text{ Z} \bar{X})^2}{n}}$

= 7.51

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 68.14

2) Average, Standard Deviation and Coefficient of Variation of Dividend Payout Ratio (DPR)

(A) Nepal Investment Bank Ltd.

F/Y	X	$(X - \bar{X})^2$
2006/07	7.99	717.17
2007/08	12.96	475.68
2008/09	53.45	348.94
2009/10	47.57	163.84
2010/11	51.88	292.75
n= 5	$\bar{X}$ X173.85	$(X - \bar{X})^2$ X1998.38

Note:

Value of X represents dividend payout ratio.

Average $(\bar{X})$ X $\frac{\phi x}{n}$

= 34.77

Standard Deviation ± X $\sqrt{\frac{(X - \bar{X})^2}{n}}$

= 19.99

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 57.49

(B) Everest Bank Ltd.

F/Y	X	$(X - \bar{X})^2$
2006/07	12.75	330.15
2007/08	21.78	83.54
2008/09	30	0.85
2009/10	29.95	0.94
2010/11	60.11	852.06
n= 5	$\bar{X}$ X154.59	$(X - \bar{X})^2$ X1267.54

Note:

Value of X represents dividend payout ratio.

Average $(\bar{X})$ $X\frac{\phi x}{n}$

= 30.92

Standard Deviation $\pm$ $X\sqrt{\frac{(X Z\bar{X})^2}{n}}$

= 15.92

Coefficient of Variation (CV) $X\frac{\text{Standard Deviation}}{\text{Average Mean}} | 100$

= 51.49

(C) Laxmi Bank Ltd.

F/Y	X	$(X Z\bar{X})^2$
2006/07	0	670.30
2007/08	6.38	380.70
2008/09	1.26	606.64
2009/10	53.60	784.60
2010/11	67.91	1765.70
n= 5	X X129.45	$(X Z\bar{X})^2$ X4207.94

Note:

Value of X represents dividend payout ratio.

Average $(\bar{X})$ $X\frac{\phi x}{n}$

= 25.89

Standard Deviation $\pm$ $X\sqrt{\frac{(X Z\bar{X})^2}{n}}$

= 29.01

Coefficient of Variation (CV) $X\frac{\text{Standard Deviation}}{\text{Average Mean}} | 100$

= 112.10

3) Average, Standard Deviation and Coefficient of Variation of Dividend Yield (DY)

(A) <u>Nepal Investment Bank Ltd.</u>

F/Y	X	$(X - \bar{X})^2$
2006/07	0.29	3.24
2007/08	0.31	3.17
2008/09	1.44	0.42
2009/10	3.55	2.13
2010/11	4.85	7.62
n= 5	$\bar{X}$ X10.44	$(X - \bar{X})^2$ X16.58

Note:

Value of X represents dividend yield.

Average $(\bar{X})$ X $\frac{\phi x}{n}$

= 2.09

Standard Deviation ± X $\sqrt{\frac{(X - \bar{X})^2}{n}}$

= 1.82

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 87.08

(B) <u>Everest Bank Ltd.</u>

F/Y	X	$(X - \bar{X})^2$
2006/07	0.41	1.77
2007/08	0.64	1.21
2008/09	1.22	0.27
2009/10	1.84	0.01
2010/11	4.57	8.01
n= 5	$\bar{X}$ X4.57	$(X - \bar{X})^2$ X11.27

Note:

Value of X represents dividend yield.

Average $(\overline{X})$ X $\frac{\phi x}{n}$

= 1.74

Standard Deviation ± X $\sqrt{\frac{(X \text{ Z} \overline{X})^2}{n}}$

= 1.50

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 86.21

(C) Laxmi Bank Ltd.

F/Y	X	$(X \text{ Z} \overline{X})^2$
2006/07	0	1.98
2007/08	0.09	1.73
2008/09	0.02	1.92
2009/10	2.28	0.76
2010/11	4.64	10.46
n= 5	X X7.03	$(X \text{ Z} \overline{X})^2$ X13.39

Note:

Value of X represents dividend yield.

Average $(\overline{X})$ X $\frac{\phi x}{n}$

= 1.41

Standard Deviation ± X $\sqrt{\frac{(X \text{ Z} \overline{X})^2}{n}}$

= 1.64

Coefficient of Variation (CV) X $\frac{\text{Standard Deviation}}{\text{Average Mean}}$ | 100

= 116.70

4) Correlation between dividend per share (DPS) and earning per share (EPS)

(A) Nepal Investment Bank Ltd.

F/Y	x	y	xy	x^2	y^2
2006/07	5	62.57	312.85	25	3915
2007/08	7.5	57.87	434.03	56.25	348.44
2008/09	20	37.42	748.4	400	1400.26
2009/10	25	52.55	1313.75	625	2761.5
2010/11	25	48.84	1221	625	2385.35
5	82.5	259.25	4030.03	1731.25	10810.55

Note:

Value of X represents dividend per share.
Value of Y represents earning per share.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= 0.2509

Coefficient of Determination $R^2 = r.r$

= 0.0629

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.2827

(B) Everest Bank Ltd.

F/Y	x	y	xy	x^2	y^2
2006/07	10	78.42	784.2	100	6149.70
2007/08	20	91.82	1836.4	400	8430.91
2008/09	30	99.99	2999.7	900	9998
2009/10	30	100.16	3004.8	900	10032.03
2010/11	50	83.18	4159	2500	6918.91
5	140	453.57	12784.1	4800	41529.55

Note:

Value of X represents dividend per share.
Value of Y represents earning per share.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= 0.1446

Coefficient of Determination $R^2 = (r.r)$

= 0.0209

Probable error (P. E.) = $\frac{1 - R^2}{\sqrt{n}}$

= 0.2953

(C) Laxmi Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	0	10.75	0	0	115.60
2007/08	1.05	16.45	17.20	1.10	270.60
2008/09	0.26	20.70	5.40	0.07	428.50
2009/10	13	24.12	313.60	169	581.80
2010/11	15.79	23.25	367.12	249.33	540.60
5	30.10	95.27	703.42	419.50	1937.10

Note:

Value of X represents dividend per share.
Value of Y represents earning per share.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= 0.7623

Coefficient of Determination $R^2 = (r.r)$

= 0.5812

Probable error (P. E.) = $\frac{1 - R^2}{\sqrt{n}}$

= 0.1263

5) Correlation between dividend yield (DY) and earning yield (EY)

(A) Nepal Investment Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	0.29	3.62	1.05	0.084	13.10
2007/08	0.31	2.36	0.73	0.096	5.57
2008/09	1.44	1.98	2.85	2.074	3.92
2009/10	3.55	7.45	26.45	12.60	55.50
2010/11	4.85	9.48	45.98	23.52	89.87
5	10.44	24.89	77.06	38.38	167.97

Note:

Value of X represents Dividend Yield.
Value of Y represents Earning Yield.

Coefficient of correlation $r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}}$

= 0.9282

Coefficient of Determination $R^2 = (r.r)$

= 0.8616

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.0417

(B) Everest Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	0.41	3.23	1.32	0.17	10.43
2007/08	0.64	2.93	1.88	0.41	8.58
2008/09	1.22	4.07	4.97	1.49	16.56
2009/10	1.84	6.14	11.30	3.39	37.70
2010/11	4.57	7.60	34.73	20.88	57.76
5	8.68	23.97	54.20	26.34	131.03

Note:

Value of X represents Dividend Yield.

Value of Y represents Earning Yield.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= 0.9333

Coefficient of Determination $R^2 = r.r$

= 0.8710

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.0389

(C) Laxmi Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	0	1.56	0	0	2.43
2007/08	0.09	1.48	0.13	0.01	2.19
2008/09	0.02	1.95	0.04	0.04	3.80
2009/10	2.28	4.23	9.64	5.20	17.90
2010/11	4.64	6.84	31.74	21.53	46.80
5	7.03	16.06	41.56	26.78	73.13

Note:

Value of X represents Dividend Yield.
Value of Y represents Earning Yield.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= 0.9918

Coefficient of Determination $R^2 = r.r$

= 0.0.9841

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.0010

6) Correlation between dividend per share (DPS) and market price per share (MPS)

(A) Nepal Investment Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	5	1729	8645	25	2989441
2007/08	7.50	2450	18375	56.25	6002500
2008/09	20	1388	27760	400	1926544
2009/10	25	705	17625	625	497025
2010/11	25	515	12875	625	265225
5	82.50	6787	85280	1731.25	11680735

Note:

Value of X represents dividend per share.
Value of Y represents market price per share.

Coefficient of correlation $r = \frac{n\phi xy - \phi x \phi y}{\sqrt{n\phi x^2 - (\phi x)^2}\sqrt{n\phi y^2 - (\phi y)^2}}$

= -08838

Coefficient of Determination $R^2 = (r.r)$

= 0.7811

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.0660

(B) Everest Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	10	2430	24300	100	5904900
2007/08	20	3132	62640	400	9809424
2008/09	30	2455	73650	900	6027025
2009/10	30	1630	48900	900	2656900
2010/11	50	1094	54700	2500	1196836
5	140	10741	264190	4800	25595085

Note:

Value of X represents dividend per share.

Value of Y represents market price per share.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= -0.7762

Coefficient of Determination $R^2 = (r.r)$

= 0.6025

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.1199

(C) Laxmi Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	0	690	0	0	476100
2007/08	1.05	1113	1168.65	1.10	12769
2008/09	0.26	1062	276.12	0.07	1127844
2009/10	13	570	7410	169	324900
2010/11	15.79	340	5368.60	249.32	115600
5	30.10	3775	14223.37	419.49	1765213

Note:

Value of X represents dividend per share.
Value of Y represents market price per share.

Coefficient of correlation $r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\sqrt{n\Sigma y^2 - (\Sigma y)^2}}$

= -0.8369

Coefficient of Determination $R^2 = (r.r)$

= 0.7004

Probable error (P. E.) = $\frac{1-R^2}{\sqrt{n}}$

= 0.0904

7) Regression Analysis between dividend per share (DPS) on earning per share (EPS)

(A) Nepal Investment Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	62.57	5	312.85	3915	25
2007/08	57.87	7.50	434.08	3348.94	56.25
2008/09	37.42	20	748.40	1400.26	400
2009/10	52.55	25	1313.75	2761.50	625
2010/11	48.84	25	1221	2385.35	625
5	259.25	82.50	4030.03	13811.05	1731.25

Note:

Value of X represents earning per share.
Value of Y represents dividend per share.
We have,

Regression equation of y on x : y = a + bx

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$Y = na + b \quad X$
$XY = a \quad X + b \quad X^2$

Solving those of two normal equations, we get,

$$b = \frac{n\phi xy - \phi x\phi y}{n\phi x^2 - (\phi x)^2}$$

= -0.6711

a = $\bar{Y} - b\bar{X}$ =51.2965

Coefficient of Determination $R^2 = \frac{(n\phi xy - \phi x\phi y)^2}{n\phi x^2 - (\phi x)^2 \; n\phi y^2 - (\phi y)^2}$

=0.4196

Standard Error of Regression Coefficient: $S_b = \frac{\pm y}{\pm x} \sqrt{\frac{1 - r^2}{n}}$

$= 0.0420$

Where,

$\pm y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}} = 17.082$

$\pm x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}} = 47.1649$

Standard Error of Estimate Y on X: $S.E._{Y \text{ on } X} = \pm y\sqrt{1 - r^2}$

$= 13.0077$

(B) Everest Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	78.42	10	784.20	6149.70	100
2007/08	91.82	20	1836.40	8430.91	400
2008/09	99.99	30	2999.70	9998	900
2009/10	100.16	30	3004.80	10032.03	900
2010/11	83.18	50	4159	6918.91	2500
5	453.57	140	12784.10	41529.55	4800

Note:

Value of X represents earning per share.
Value of Y represents dividend per share.
We have,

Regression equation of y on x : $y = a + bx$

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$Y = na + b \quad X$
$XY = a \quad X + b \quad X^2$

Solving those of two normal equations, we get,

$$b = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$$

= 0.219

a = $\bar{Y} - b\bar{X}$ =8.0429

Coefficient of Determination $R^2 = \frac{(n\Sigma xy - \Sigma x \Sigma y)^2}{n\Sigma x^2 - (\Sigma x)^2 \, n\Sigma y^2 - (\Sigma y)^2}$

=0.0209

Standard Error of Regression Coefficient: $S_b = \frac{\pm y}{\pm x} \sqrt{\frac{1 - r^2}{n}}$

= 0.0680

Where,

$\pm y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}}$ = 28.34

$\pm x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}}$ = 81.61

Standard Error of Estimate Y on X: $S.E. = \pm y\sqrt{1 - r^2}$

= 28.0423

(C) Laxmi Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	10.75	0	0	115.56	0
2007/08	16.45	1.05	17.27	270.60	1.10
2008/09	20.70	0.26	5.38	428.49	0.07
2009/10	24.12	13	313.56	581.77	169
2010/11	23.25	15.79	367.11	540.56	249.32
5	95.27	30.10	703.32	1936.98	419.49

Note:

Value of X represents earning per share.
Value of Y represents dividend per share.
We have,

Regression equation of y on x: $y = a + bx$

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$$Y = na + b \quad X$$
$$XY = a \quad X + b \quad X^2$$

Solving those of two normal equations, we get,

$$b = \frac{n\phi xy - \phi x\phi y}{n\phi x^2 - (\phi x)^2}$$

= 1.0665

a = $\bar{Y} - b\bar{X}$ = -14.36

Coefficient of Determination $R^2 = \frac{(n\phi xy - \phi x\phi y)^2}{[n\phi x^2 - (\phi x)^2][n\phi y^2 - (\phi y)^2]}$

= 0.5809

Standard Error of Regression Coefficient: $S_b = \frac{\sigma y}{\sigma x}\sqrt{\frac{1 - r^2}{n}}$

= 0.0415

Where,

$\sigma y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}}$ = 8.76

$\sigma x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}}$ = 17.74

Standard Error of Estimate Y on X: $S.E. = \sigma y\sqrt{1 - r^2}$

= 5.6771

8) Regression Analysis between dividend per share (DPS) on earning per share (EPS)

a) Nepal Investment Bank Ltd.

F/Y	X	y	xy	x^2	y^2
2006/07	5	1729	8645	25	2989441
2007/08	7.50	2450	18375	56.25	6002500
2008/09	20	1388	27760	400	1926544
2009/10	25	705	17625	625	497025
2010/11	25	515	12875	625	265225
5	82.50	6787	85280	1731.25	11680735

Note:

Value of X represents dividend per share.
Value of Y represents market price per share.
We have,

Regression equation of y on x : y = a + bx

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$Y = na + b \quad X$
$XY = a \quad X + b \quad X^2$

Solving those of two normal equations, we get,

$$b = \frac{n\phi xy - \phi x\phi y}{n\phi x^2 - (\phi x)^2}$$

= -72.1770

$a = \bar{Y} - b\bar{X}$ = 2548.37

Coefficient of Determination $R^2 = \frac{(n\phi xy - \phi x\phi y)^2}{n\phi x^2 - (\phi x)^2 \, n\phi y^2 - (\phi y)^2}$

= 0.1880

Standard Error of Regression Coefficient: $S_b = \frac{\pm y}{\pm x} \sqrt{1 - r^2}$

$= 12.2239$

Where,

$\pm y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}} = 1402.726$

$\pm x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}} = 18.59$

Standard Error of Estimate Y on X: $S.E._{Y} = \pm y\sqrt{1 - r^2}$

$= 1262.457$

b) <u>Everest Bank Ltd.</u>

F/Y	X	y	xy	x^2	y^2
2006/07	10	2430	24300	100	5904900
2007/08	20	3132	62640	400	9809424
2008/09	30	2455	73650	900	6027025
2009/10	30	1630	48900	900	2656900
2010/11	50	1094	54700	2500	1196836
5	140	10741	264190	4800	25595085

Note:

Value of X represents dividend per.
Value of Y represents market price per share.
We have,

Regression equation of y on x : $y = a + bx$

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$Y = na + b \quad X$
$XY = a \quad X + b \quad X^2$

Solving those of two normal equations, we get,

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}$$

= -41.5432

a = $\bar{Y} - b\bar{X}$ = 3311.32

Coefficient of Determination $R^2 = \frac{(n\sum xy - \sum x \sum y)^2}{n\sum x^2 - (\sum x)^2 \, n\sum y^2 - (\sum y)^2}$

= 0.6024

Standard Error of Regression Coefficient: $S_b = \frac{\pm y}{\pm x} \sqrt{\frac{1 - r^2}{n}}$

=5.7824

Where,

$\pm y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}}$ = 2048.43

$\pm x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}}$ = 28.34

Standard Error of Estimate Y on X: $S.E. = \pm y\sqrt{1 - r^2}$

= 1295.5409

c) <u>Laxmi Bank Ltd.</u>

F/Y	x	y	xy	x^2	y^2
2006/07	0	690	0	0	476100
2007/08	1.05	1113	1168.65	1.10	1238769
2008/09	0.26	1062	276.12	0.07	1127844
2009/10	13	570	7410	169	324900
2010/11	15.79	340	5368.6	249.32	115600
5	30.10	3775	14223.37	419.49	3283213

Note:

Value of X represents dividend per.
Value of Y represents market price per share.

We have,

Regression equation of y on x: y = a + bx

Where,

a = regression constant

b = regression coefficient (Slope of the Regression Line)

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

$$Y = na + b \quad X$$
$$XY = a \quad X + b \quad X^2$$

Solving those of two normal equations, we get,

$$b = \frac{n\phi xy - \phi x\phi y}{n\phi x^2 - (\phi x)^2}$$

= -35.6801

a = $\bar{Y} - b\bar{X}$ = 969.7936

Coefficient of Determination $R^2 = \frac{(n\phi xy - \phi x\phi y)^2}{n\phi x^2 - (\phi x)^2 \; n\phi y^2 - (\phi y)^2}$

= 0.1203

Standard Error of Regression Coefficient: $S_b = \frac{\sigma y}{\sigma x}\sqrt{\frac{1 - r^2}{n}}$

= 14.80

Where,

$\sigma y = \sqrt{\frac{y^2 - (\bar{y})^2}{n}}$ = 736.6393

$\sigma x = \sqrt{\frac{x^2 - (\bar{x})^2}{n}}$ = 8.755

Standard Error of Estimate Y on X: $S.E. = \sigma y\sqrt{1 - r^2}$