DIVIDEND POLICY OF JOINT VENTURE BANKS IN NEPAL

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CHAPTER ONE
INTRODUCTION

1.1   Background of the Study

In Capital market, all firms operate in order to generate earning. Stockholders supply equity capital hopping to share in these earning either directly or indirectly. When a company pays out a portion of its earning to shareholders in the form of dividend, the shareholders get benefits directly. If instead of paying dividend, the firms retain the funds to exploit other growth opportunities, the shareholders can expects to benefit indirectly through future increase in price of stock. Thus, shareholders wealth can be increased through either dividend or capital gains.

Dividend policy is an integral part of the firm's financing decision. Dividend policy decision is one of the main decisions of financial management because it affects the financial structure the flow of funds, corporate liquidity and investors' attitudes. After the successful completion of fiscal year having sufficient profits, management decides to declare dividend to shareholders. The important aspect of dividend policy is to determine the amount of earning to be distributed to shareholders and the amount to be retained in the firm. It is, therefore, a wise policy to maintain a balance between shareholders interest with that of corporate growth from internally generated funds. The return to shareholders should be better paid as dividend.

Banking sector plays significant role in the economic development of a country. Bank is a resource for the economic development which maintains the self-confidence of various segments of society and, extends credit to the people. So commercial banks are those financial institutions mainly dealing with activities of the trade, Business, commerce, industry and agriculture that seek regular financial and other helps from them for growing and flourishing the objective of commercial banks is to mobilize idle resources into the most profitable sector after collecting them from scattered sources. The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths who developed the practice of storing people's gold and valuables under such arrangement the depositors would leave their gold for safekeeping and given a receipt by the goldsmith. Whenever, the receipt was

presented the depositors would get back their gold and valuables after paying a small amount as fee for safekeeping and serving.

Commercial banks contribute significantly in the formation and mobilization of internal capital and developmental efforts. They furnish necessary capital required for business and commerce in mobilizing the disperse savings of the individuals and institutions. Since the important of banks are highly appreciated, it needs proper attention to run successfully. They should be established and conducted after analyzing the various factors. Normally, the existence of profit to any business firm is the basic factor. If there is no profit a business firm becomes unable to provide its facilities in the long time and it couldn't survive this profit which, can be distributed among the owners as dividend.

One of the major causes of public is interested to invest money on the shares of bank or other institutions for dividend. It (dividend) refers to the distributed earning to the ordinary shareholders of the firm in return to their investment. Basically, the firm which is running in profit is capable to pay dividend. The amount which is distributed as dividend should be adequate to meet the normal expectation of shareholders.

When government permitted to establish foreign join venture bank (JVBs) in the early 1980's.Three JVBs namely Nepal Arab Bank Ltd, Nepal Grindlays Bank Ltd, and Nepal Indosuez Bank (now change its name respectively NABIL Bank, Standard Chartered and Nepal investment bank) were established in 1984, 1985 and 1986 respectively. After restoration of democracy, the democratically elected government adopted the liberal and market oriented economic policy, then the numbers of JVBs have been increasing rapidly.

In global prospective, Joint ventures are the modes of trading though partnership among nations and also a form of negotiations between various groups of industries and trades to achieve mutual exchange of goods and services for sharing comparative advantages. "Joint venture is the joining of forces between two or more enterprise for the purpose of carrying out a specific operation (industrial or commercial investment, production or trade.) The major decision of the firm is its dividend policy, the percentage of earnings it pays in cash to its shareholders. Dividend payout of courses reduces the total amount of internal financing. "By a dividend policy we mean some

kind of consistent approach to the distribution versus retention decision rather than making the decision no the purely adhoc basis form period to period."

In Nepal *The Tajarath Adda* may be regarded as the father of modern banking institution and for quite a long time it tendered a good service to the government as well as to the general public, However, the concept of modern banking institution in Nepal was introduced as the first commercial bank named, *The Nepal Bank Limited* established in 1994 B.S. under Nepal bank Act 1993 B.S. before that the credit needs of the people for commercial and other purpose were met mostly by the unorganized market of the private money lenders.

Dividend management is one of the most important aspects of a corporate financial management. After successfully completing the business operation and recording of the profit the firm would have two options ahead of them. One is to retain certain or all of the profits in the form of retain earning. This depends upon the profitable investments opportunities that the firm may overcome in the future time. Other is to distribute the profit in the form of dividend to the shareholders. Therefore the policy of dividing the firm's net profit into two parts that is retained earning and dividend is known as dividend policy. In other words dividend policy can also be said as a profit management policy.

Payments of dividend would have a certain impact upon the market price of share. If the firm pays a healthy dividend over and over then the market price of share of that firm would be simply high. Market value of share may be high or low than the book value. If the firm is a growing concern and its earning power is greater than cost of capital the market value of share will be higher than the book value or vice versa. Dividend policy and market price of share is always co-related. If the company pays high dividend the market price of share increases or it's the other way round. But in some cases out of this inter relation the price may remain constant or decrease too. Therefore the information lacks on flow is also vital in the analysis of market price of share.

Firms may differ as per their dividend policies. In the secondary market the declaration of the dividend or the dividend policy of the firm changes the market price of the shares. Therefore it is expected that there is some impact of dividend, policy over the market price of the stock.

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

"The payment of the corporate dividend is at the discretions of the Board of Directors. Most corporations pay dividend quarterly. Dividends may be paid in cash, stock or merchandise. Cash dividend is the most common; merchandise dividends are the least common. Stockholders are not promised a dividend, but he/she grows to expect certain payment on historical dividend pattern of the firm. Before dividend are paid to common stockholders the claims of creditors, the government and preferred stockholders must be satisfied" is the theory but in Nepalese company cash dividend is most popular and stock dividend is the new practice (Gitman, 1988:609).

1.2 Statement of the Problems

Firms may differ as per their dividend policies. In the secondary market the declaration of the dividend or the dividend policy of the firm changes the market price of the shares. Numerous theories and empirical findings concerning dividend policy have been reported in the financial literature over the past many years. Dividend decision however is crucial as well as controversial area of financial management. It is partly due to the various government ruled and regulations acting and reacting in the banking operations. There is no limit to the identification of the problem about dividend policy that is visible in Nepalese commercial banks. While keeping this in mind selected problems of commercials banks with regard to dividend policy that can be quantified are taken. In Nepal there are only a few companies that pay dividend to shareholder's commercial banks especially joint venture banks have sufficient earning and are capable to pay high dividends. But they are not consistency while earning is low the pay high dividend and sometimes when earning is high they pay low dividend.

The above facts inspire to study what are the factors that affect the dividend decision and valuation of the shares. Earning is also treated as financing sources of the firm. When the firm retains it's earning, it will result in decreasing leverage ratio,

expanding activities and increasing profit in succeeding year whereas. If the firm pays dividend it may need to raise capital through capital market which adulterate ownership control. In the later case, the firm takes loan or raises debenture, which ultimately affect on risk characteristics of the firm. However dividend is a most for attraction of investors and it reflects firms healthy position in the market. The capital market of Nepal is just in the way of development stage, yet investors are investing in new companies with out having the perspective analysis of those companies. Stock price increases with the announcement of dividend although the firm-announcing dividend might be of under capitalized. Many researches have been made earlier in this concern. However, no other studies have been made to see the impact of dividend policy on the market price of the stock including the actual scenario of Nepalese capital market. Moreover, the research question is to find out what sorts of limitation or gap have made a culture of stock price change.

Following are the major problems that have been identified for the purpose of the study.

1) Are the banks having ability to pay dividend?

2) Are these banks have uniformity in dividend distribution?

3) What is the relationship between dividends with earning per share, market price of share of the companies?

4) Does the dividend decision affect the market price of the share differently in different companies?

5) Is it possible to increase the value of stock by changing dividend policy or dividend pay out ratio?

1.3   Objective of the Study

The main objective of the dividend policy is to maximize return on shareholder equity. The study is an attempt to make overall review regarding dividend policy of joint venture banks. To be more precise the basic objectives of the study are:

1) To study the prevailing practices and effort made in dividend policy in the Nepalese firms with the help of sample banks.
2) To examine the impact of dividend on market price of share.
3) To know the uniformity among dividend per share, earning per share and dividend payout ratio of these banks.

1.4   Focus of the Study

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

1.5   Significance of the Study

People are attracted to invest in shares for the purpose of getting ore and more returns. Therefore dividend policy should be and effective to attract new investors and present investors to keep happy and to maintain goodwill of the company. When any new company floats shares through capital market very big congregation gathers to apply for owner's certificate. It indicates people's expectation on higher return of investment in shares.

While investing in shares the investor forgoes opportunity income, he could have earned. In capital market the return can be earned in two ways a) by means of dividend and b) by capital gains, i.e. increase in share prices. Due to the lack of enough knowledge the people are investing hit-or-miss in shares. It is necessary to establish clear conceptions about the return that results from investing in securities. In Nepal, there are almost none of the companies adopting dividend policy. There would be many reasons behind it for which there is non-enough study.

Therefore, considering all these facts, the study is undertaken which will help to meet deficiency of the literature relating to dividend decision and factors affecting dividend policy. So, the study of dividend policy is considerable importance.

As dividend is one of the crucial factors in every organization and dividend policy decision is one of the most important decisions, this might serve to be important information for these respective firms taken as sample. Besides, the shareholders and financial institutions may also be benefited from this study. Moreover, this study will support the future researcher by providing valuable information. Specifically the significance of this study can be summarized in the following points:

i)   The study will be helpful to the management and policy makers in setting and following a dividend policy,

ii)   The dividend policy, of the banking sector plays vital role to develop capital market in the nation.

iii)   To raise public awareness about the relationship between dividend policy and market price of share in order to help them to behave rationally while making their investment decisions.

1.6 Limitation of the Study

Dividend is the most important topic in financial management. There are several aspect of decision that should be undertaken by financial manager to achieve the management goal. Area of financial management decision is investment, capital structure, liquidity, leverage, dividend and others. Only dividend is selected in this study to make more specific. This study is simply presented to fulfill a partial requirement of MBS programmed. So it is a mini-research which is conducted and submitted with in a time constraint. Every study has its own limitations and following are the limitations of this study.

a) This study is mainly conducted on the secondary data so the result depends on the reliability of the secondary data.

b) There are many factors that affect dividend decision and valuation of the firm. However only those factors related with dividend will be considered in this study.

c) This study only covers six fiscal years beginning from 2003/04 to 2008/09.

d) Data related to cash dividend will be analyzed and interpreted.

1.7   Organization of the Study

This study has been organized into five chapters.

Chapter One- Introduction: This chapter deals with subject matters of the study consisting background of the study, statement of the problem, objective of the study and significance of the study.

Chapter Two- Review of literature: This chapter deals with review of the different literature of the study field. Therefore it includes conceptual framework along with the review of major books, journals, research works and thesis etc.

Chapter Three- Research Methodology: This chapter deals with research methodology and it includes research design, population and sample, source and technique of data collection, data analysis tools and limitation of the methodology.

Chapter Four- Data Presentation and Analysis: This chapter deals with analysis and interpretation of the data using financial and statistical tools described in chapter three. Similarly this chapter also includes the major finding of the study.

Chapter Five- Summary, Conclusion and Recommendations: This chapter deals with summary, conclusion and recommendations.

CHAPTER TWO
REVIEW OF LITERATURE

This chapter deals with the reviewing of different sources of dividend policy literature such as books, journals, research works & unpublished thesis. Similarly this chapter includes two main heading like conceptual framework and review of related studies. Review of national and international studies and related theory to the dividend and dividend policy will absolutely help to this research.

2.1   Conceptual Framework

Dividends refer to the portion of earnings made by the business organization, which distributed to shareholders as return of their investment in shares or dividend represents a distribution of book surplus to the shareholder. In other words, it is the reward for bearing the risk of uncertainty. If any firm makes profit then they have two alternatives, one is reinvest the earning in profitable sector or in the expansion of business and other is distribute it to own shareholders. Every firm wants to tries to make balance between these two alternatives. For this they retain certain percentage of profit in business and rest is distributed to stockholders. This distributed income called dividend. It is very difficult to decide payout ratio because firm needs more fund for expansion. In other hand the firm should have to satisfy shareholders by providing return on their investment. So that it is necessary to adopt an effective dividend policy.

Dividend policy is one of the key decisions of financial management. Dividend affects the financial structure, corporate liquidity, the flow of funds and investors attitudes, it is related to overall financial decision. Dividend policy determines the ratio of earning to be retained and payout.

As the dividend payment and retain earning have inverse relationship. Therefore, it is most necessary to closely examine before applying appropriate dividend policy. Higher dividend payout reduces the retention amount which affects the internal financial, in other hand lower dividend payout affects market price of stock, The decision regarding dividend payment depends upon the objective of the firm.

If the firm have wealth maximization objective, it pays higher dividend otherwise it uses the fund to re-investment for growth and expansion of the firm with lower dividend payout.

Most of the investors expect dividend to continue in each year as well as to receive price when they sell the stock (Weston and Bringham, 1989:228). The expected final stock price includes the returns of the original investment plus a capital gain. If the stock is actually sold at price it's purchase price the investor will receive a capital gain as such the shareholder expect an increase in market value of the common stock over time. At the same period, they expect firm's earning in a form of dividend. So the shareholders should be satisfied with dividend or capital gain.

Dividend would be effective to stockholder, one might think and that would be a tendency for corporation to increase distribution, But one might equally pressure that gross dividend would be reduced some what with an increase in net profit after tax dividend still available to shareholders and increase in retained earnings for the corporation (Weston and Bringham, 1989:230). Dividend is a good measure of sound company. Company has good opportunities of reinvestment of fund and it reduces uncertainty of future income, which indicates financial strength of the company.

2.1.1 Earnings

Earning is the major objective of any business or the organization. It is the key success factors of the organization,- no one corporate firm can completely wipe out the profit maximization objectives. Earning is the basic strategy in the modern firm to sustain and expansion and to meet the expectation of the actual owner. Profit concept, therefore occupies the main importance in the managerial decision-making. Because of uncertainty in the business entrepreneur hopes for earning or bearing of risk is compensated by means of earning. The profit resulted from favorable movements of general price-led. Greater the degree of monopoly power, the greater the profit made by the entrepreneur.

In any way the people discussed about the earnings, there is no doubt that profits are residual income left after the payment of the contractual rewards to other factors of productions.

Forms of Earnings

Security analysis and the earnings are the integral part of study therefore; first there should be clear in the forms and concept of the earnings. Earnings broadly can be divided into two parts based on economists' and the accountants' views.

- Accounting earnings
- Economic earnings -

i) Accounting Earnings

In corporation with management, the accountant produce on a quarterly basis, a set of financial statement for the firm that ends with a figure for the firm's accounting earnings that are known as reported earning. In other word, accounting earning denotes the difference between revenues and expenses, including none equity expenses (interest) such as debt. This difference is divided by number of equity shares outstanding to calculate earning per share (EPS). It may also be divided by the book value per share to calculate the return on equity (ROE).

- A basic principle of accounting makes the break value of firm's equity at the end of the period equal to:
- Its value at the end of the previous period, plus
- The portion of accounting earnings for the period i.e. retained by the firm, on the assumption that there has no change in the numbers of shares outstanding during the periods (Sharpe and Bailey, 2000:10).

Letting 'Bt' denotes the book value of the equity of the firm at the end of the period 't' 'Eq' denotes the accounting earnings for the period of 't' and 'D_t' denotes the dividend paid during the period 't', this relationship can be expressed algebraically as following:

$$Eq = B_{t\text{-}Bt\text{-}1} + D_t$$

ii)   Economic Earnings

Symbolically, economic earning is represented by 'Et', which may be defined as the amount that would be obtained in the above equation if the change in the book value of the firm equaled the change in the economic value of the firm.

$$Et^e_a = V_t - V_{t-1} + D_t$$

Hence, the change in economic value of the firm during the period t, Vt-Vt-1 is defined as the change in the market - value of the firms' common stock assuming that there is no change in the market value of the firms' other securities. Economic value - can be pronounced~ as market value also. It is sometimes contended that the investors estimate the value of the firm's common stock by' directly applying the formula to the firm's current and past accounting earnings. This is permissible since the generally accepted accounting principle set by the regulatory authorities allows a large amount of discretion in how certain items are accounted for.

As a result management may pressure accounts to user those principles that maximized the firms value or a level of reported earnings or that result in a high growth rate of reported earnings or that smooth earning by reducing the year to year variability of earnings around a growth rate. Some of these activities can be continued for the limited years whereas other for the long periods or unlimited periods. Permanent and transitory components of earnings:

a)   **Permanent components:** The permanent component is the component that is likely to be reported in the future.

b)   **Transitory component:** It is the component, which is not likely to be reported in the future.

It is said that intrinsic value of the stock depends on the firms' future earning prospects. This suggests that change in stocks' intrinsic value and in turn its price, will be correlated with change in the permanent components of its earnings but not with changes in the transitory component. If the transitory component is positive, the price earning ratio would be relatively low due to a relatively large number in dominator and vice versa. Considering the following relationships can prove the same thing:

Price - Earning Model

Price-earning Ratio = MPS/EPS

Reported earnings = Permanent component + Transitory component

The transitory component is negative, the earnings price per the share relatively low, and as a result, price earnings ratio will be relatively large. The permanent components of earnings will change over time, which compels the investors to revise their forecast. This will lead to a change in firms' stock price, in turn, its price earnings ratio. But the transitory components of the earnings have greater impact on price earnings ratio because the value of transitory components may be positive or negative.

2.1.2 Dividend

Dividend is the periodic payment made to stockholders to compensate them for their wealth and investment funds. Dividends are pro-rata distributions to shareholders retained earnings. They can be in the form of cash, stock or property. Generally, corporation can only declare dividends out of earnings, although some states laws and corporate agreements permit to declaration of dividends from sources other than earnings (Hawkins, 1997).

In fact, dividend is the portion of the net earnings, which is distributed to the shareholders by a company. After successfully completing the business activities of a company, if the financial statement of it shows the net profit, the Board of Directors (BOD) decides to declare dividend to stockholders. Therefore, the payment of corporate dividend is at the discretion of the BOD. There are two fundamental theories regarding to dividend:

) Residual theory
) Wealth maximization theory

(i)   Residual Theory

Residual theory is that, in which the first priority is given to the profitable investment opportunities. If there are profitable opportunities, the firm invests in those and residual income (if any) is distributed to the stockholders.

Residual theory of dividends means, "A theory that suggests that the dividend paid by .the firm should be the amount left over after all acceptable investment opportunities have been under taken (Gitman, 1988:616)." Using this approach the firm would treat the dividend decision in three steps as follows:

Step I

Determine the optimum level of capital expenditure which would be the level generated by the point of intersection of the investment opportunities schedule (IOS) and weighted managerial cost of capital (WMCC) function.

Step II

Using the optimal capital structure proportion, it would estimate the total amount of equity financing needed to support the expenditures generated in step I.

Step III

Because the cost of retained earnings K_r is less than the cost of new common stocks K_n, retained earnings would be used to meet the equity' requirement determined in step II. If retain earnings are inadequate to meet this needs, new common stock would be sold. If the available retain earnings are in excess to this needs, the surplus amount would be distributed as dividends.

(ii)   Wealth Maximization Theory

Under wealth maximization theory, larger dividends is announced and distributed to - shareholders in order to (or in hope with) maximize the wealth of the stockholders. Basically, it is applicable for those companies, which are just established and to those companies it will be beneficial whose financial profits are in decreasing trends. The main purpose of the wealth maximization theory' of dividend is to make assurance to the stockholders that they are interesting in the firm, which has not better market value.

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

2.1.2.1 Cash Dividend

Cash dividend is simply the dividend paid in cash or the proportion of net earnings, which are distributed to shareholders, as cash in proportion to their shares of company is known as cash dividend. Actually, it is most popular and widely used form of dividend, all over the world.

Generally, stockholders have great preference for cash dividend. Both the total assets and net worth of the company are reduced by same amount, when the cash dividend is announced -or distributed. Moreover, the share price will fall (or may not) after the cash dividend. Therefore, the need is that, the firm should have sufficient fund for the distribution of the cash dividend among shareholders or if the firm does not have sufficient fund for the distribution: it should borrow from any source. For the better cash dividend stability cash planning, budgeting and control mechanism are suggested or required. Cash dividend has the direct impact on the shareholders, it is one of the most interesting matters of the study, and the volume of the cash dividend depends upon earning of the firm and on the management attitude or policy.

Cash dividend has the psychological value for stockholders. Each and everyone like to collect their return in cash rather than non-cash means. So cash dividend is not only a way to earnings distribution but also a way of perception improvement of a company in the capital market. The objectives of the cash dividend are:

) To distributes the earnings to shareholders, as per their holding proportion in the stock.
) To build an image in the capital market so as to create favorable condition to raise the fund at the needs.
) To make distribution easy and to account easily.

2.1.2.2 Stock Dividend & Stock Split

It is the dividend in which the firm issues additional shares of its own stock to stockholders, in proportion to the numbers of the shares held in lieu of the cash dividend.

Stock dividend: A payment of additional shares of stock to share holders often used in place of or in addition to cash dividend (Van Horne, 2000:328).

Stock dividend is known as bonus shares too. An issue of bonus share represents a distribution of shares in addition to the cash dividend (known as stock dividend in U.S.A.) the existing shareholders (Pandey, 1995:705).

The payment of stock dividend does not do not cash and 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 in cash and simply' involves a book keeping transfer from retain earning to stock accounts (Weston and Copeland, 1991:680).

The net effect of the stock dividend would be an increase in numbers of shares of current stockholders to represent the same interest as it was before using the stock dividend.

Practically, if the stock dividend is issued, the par value of the share remains constant. In case of stock split the par value of the share does not remain constant, therefore the common stock, paid-in-capital and retain earnings account also remain same. Except in accounting treatment the stock dividend and stock split are very similar. A sock split however is usually reversed for occasion when a company' wishes to achieve a substantial reduction in the market price of the shares (Van Horne, 2000:328).

In any case, the concern of the management is the positive effect on the stock price.

An analysis of all the benefits and cost of stock dividends depicts the net effect on the value of stock, and provides a basis to issue or not to issue stock dividend. In stock split there is no change in the capital account: instead a large numbers of the shares of the common stock is issued. In two-for-one stock split, stockholders receive two shares for each one previously held. The book value peer share is cut in a half and par or stated, value per share is similarly changed (Pradhan, 1992:384).

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

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

Decision regarding the stock split depends on the expected increase in the price/earning (P/E) ratio and the stock value. What matters is the increase in the stock price as the result of the decision (Pradahn, 1992:385).

The accounting treatment portrayed holds for what is known as small percentage. Stock dividend is usually a distribution of 20 percent or less of the number of common shares already outstanding. Because larger common stock dividends will materially reduce share price, the accounting authorities usually require that capitalization change be in terms of the par value of the additional share issued.

Practically if the stock dividend is issued, the par value remains constant. In case of Stock split the par value of the share does not remain constant, therefore the common stock, paid-in-capital and retain earnings account also remain same. Except in accounting treatment, the stock dividend and stock split are very similar. A stock split however is usually' reversed for occasions when a company wishes to achieve a substantial - reduction in the market price per share.

A stock dividend pays additional stock to stockholders. Theoretically, it is not a thing of value to the stockholders unless cash dividends per share remain unchanged or are increased. Stock dividends may serve to keep the market price per share in a popular trading range. A more effective device for reducing market price per share is- stock split. Both stock dividends and stock splits appear to have informational or signaling effect. When other things are held constant, share price tends to rise around the time of announcement, consistent with the positive signal (Van Horne, 2000:328).

The integral part of dividend policy of a firm is the use of bonus shares and the stock splits. Both involves issuing new shares on a pro-rata basis to the current share holders while the firms assets, its earning, the risk bearing assumed and the investors percentage ownership in the company remain unchanged. The only definite results from either bonus share or share split are the increase in the number of shares outstanding (Khan and Jain, 1995:588).

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

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

2.1.3 Dividend Policy

Dividend policy determines the division of earnings between payments to stockholders and reinvestment in the firm. Retain earnings are one of the most significant sources of fund for financing corporate group, but dividends constitute the cash flow that accrue to stockholders (Gupta, 1973:657).

The third major decision of the firm is its dividend policy; the percentage of earnings it pays's in cash to its stockholders. Dividend payout, of course, reduces the amount of earnings retain in the firm and affect the total amount of internal financing. The dividend payout ration obviously depends on the way earnings are measured for ease of exposition, we use account net earnings but assume that these earnings can form true economic earnings. In practice, net earning may not conform and may not be an appropriate major of the ability of firm to pay dividends (Van Horne, 2000:328).

Dividend policy refers to the issue of how much of the total profit a firm should pay to its stockholders and how -much to retain for investment so that the-combined present and future benefits maximize the wealth of stockholders. The dividend policy, however, not only specifies the amount of dividend, but also form of dividend, payment procedure etc.

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

⟩　　　Amount of dividend to be paid-the policy outlines the basis to determine the amount of dividend to be paid,

⟩　　　Form of dividend- Cash dividend and/or stock dividend,

⟩　　　Payment procedure

ʃ   Stock repurchase and stock splits (Pradhan, 1992:376)

Dividend policy according to the application could be categorized as following:

2.1.3.1 Stable Dividend Policy

When a firm constantly pays a fix amount of dividend and maintains it for all times to come regardless of fluctuations in the level of its earnings, it is called a stable dividend policy. In this dividend policy, the dividend will be paid regularly'. A consistent dividend policy' is likely to enhance the share price by satisfying the firm's clientele and by providing consistently positive signal about future earnings prospects (Viscione and Roberts, 1987:377). This policy is applicable in the firm having regular and stable income. But this policy' does not refer to fix income every year or periods. It can be changed proportionately with the change in companies earning. This policy has three forms:

a)   Stable Dividend Per Share

When a firm pays a fix amount of dividend per 'share over the year and does not change- it with fluctuations in the level of its earnings, it is said to have persuade a relatively stable dividend policy. The most popular kind of dividend policy' is one that pays a regular steady dividend (Colb, 1987:419). This policy is completely rational policy and poses the strategic financial management; therefore, it is related to the company's ability to pay dividends.

b)   Stable Payout Ratio

If the firms distribute a certain percentage of its profit as dividend in every year is known as stable -payout ratio. The ratio of dividend to earning is called payout ratio. If the firm simply applied the target payout rate to each year earnings, dividend could fluctuate widely (Barley and Myers, 1988:375).

c)   Low Regular plus Extra Policy

If the company usually pays dividend constantly' to stockholders at a fixed rate and do not change the payout ratio unless it is believed that the changes in earnings are permanent. When the earning of a firm is swelling, it may have decided to distribute a part of increased earnings as extra dividend. It is known as low regular plus extra policy'. Extra dividend is declared only in the year which earnings exceed annual dividend requirement by some given amount and it will be skipped subsequently, when business earning will drop to normal level. It could be the better policy to that company whose stockholders prefer at least a certain amount of regular income or return.

2.1.3.2 No Immediate Dividend Policy

If the company does not declare dividend unless the company earn large income is called no immediate dividend policy. In other words, if there is not any hurry about dividend payment and if it could be only when the company earns more profit is known as no immediate dividend policy. This policy is usually pursued the following circumstances:

-) When the firm is new and rapidly growing concern, which needs tidy amount of funds to finance its expansion program,
-) When the firms excess to capital market is difficult,
-) When availability of funds is costlier,
-) When stockholders have agreed to accept higher return in future.

In fact, this policy should follow by issue of bonus shares.

2.1.3.3 Stock Dividend Policy

If the company regularly' pays dividends to its shareholders in stock instead in cash, then it is called regular stock dividend policy. Regular stock dividend policy' is also designated as *bonus shares*. Such policy should follow under the following circumstances:

-) When the firm needs cash generated by earnings to cover its modernization-and expansion project,

)   When the firm is deficient in cash despite high earnings, this is particularly true when the firm's sale is affected through credit and entire sales proceeds are tied in receivables.

2.1.4 Factors Affecting Dividend Policy

Every joint stock company after the financial performance declares the dividend payout. The typical dividend policy of most firms is to retain, (one third to half of the net earnings) and distributes the remaining amount to the shareholders (Van Horne, 2000: 331.

In fact earning and dividend has positive correlation (most of the times) therefore when earnings increase the dividend is also become so and vice versa. But the challenge of the financial manners is to bring balance between company's fund requirement (need) and stockholders expectations (desires).

There are many practical factors, which are vital in dividend decisions. To maintain the balance between both, company's need as well as inventor's expectation, the following matters and circumstances are to be considered:

i)   Shareholders' Expectations

Shareholders may have different expectations as per their economic status and the effect of tax differential on dividend and capital gain. A retire shareholder may require regular dividend while a wealthy shareholder may -prefer the capital gain benefit.

ii)   Closely Held Companies

In case of closely held companies; the body of shareholders is small and homogeneous and management usually knows the expectations of the shareholders. Therefore they can easily adopt a dividend policy, which satisfies most shareholders. If most of the shareholders are in high tax bracket and have the preference for capital gains to current dividend income, the company can establish a dividend policy of paving less or no dividend and retaining the earnings within the company.

iii) Widely Held Company

It is a formidable task to ascertain the preference of shareholders in a widely held company. The numbers of shareholders is very large and they may have diverse desires regarding dividends and capital gains. Shareholders of widely held company may be divided in four groups:

a) Small Shareholders

These types of shareholders are in small numbers investing in few companies with the hope of dividend regularly or making capital gain. Small shareholders purchase share only when their saving permits, therefore they do not have the definite investment policy. The company' having small shareholders should make the policy of high dividend payment.

b) Retired and Old Person

These persons generally invest in shares to get regular income. They use their savings or provident or pension funds to purchase shares. These persons may, therefore, select shares of companies, which have history of paying regular and liberal dividends.

c) Wealthy Investors

Wealthy investors are very much concerned with the dividend policy followed by a company. They have a definite investment policy of increasing tier wealth and minimizing the taxes. These persons are in high tax brackets and the dividend received in cash by them would be taxed at high rate. The wealthy shareholders' group is quite dominating in many companies as they holds relatively large blocks of shares and are able to influence the composition of the board of directors by their majority voting rights. On the dividend policies of these companies, this group will have a considerable influence.

d) Institutional Investors

Such investor purchases the large blocks of shares to hold them for relatively long periods of time. Institutional investor, unlike wealthy shareholders, are not concerned with personal income tax but with profitable investment. Most institutional investor

avoids speculative issues, seek diversification in their investment portfolio and favor a policy of regular cash dividend payment.

iv) Financial Need of the Company

The financial need of the company may conflict with the desires of the shareholders. Management prudence requires giving more weightage to the financial need of the company'. However, retain earnings should be used as profitable investment opportunities. If shareholders themselves have better investment opportunities the earnings should distributed to them so that they' may be able to maximize their wealth. When company has internal rate of return is greater than -required by the shareholders; it would be able to the advantage of shareholders to allow the re-investment of earnings by the company.

When the company does not have profitable opportunities and earns a rate on investment, which is lower than, the rate required by' the shareholders; it is not proper to retain earnings.

v)   Dividend Paying Constraints

Most companies recognized that the shareholders have desire to receive dividend, although shareholders are also interested in capital gain. How much dividend should a company pay? As it is the critical question, the companies' decision regarding to amount of earnings to be distributed as dividend depends upon a number of factors; described as follows:

Liquidity

The liquidity of a company is prime -consideration in much dividend decision. Because divided represent a cash outflow, the greater the cash position and overall liquidity position of the company, the greater its ability pay a dividend. A company that is growing and profitable may not be liquid because its funds may go into the fixed assets and permanent working capital. Because the management of such a company usually desired to maintain some liquidity cushion to give its financial flexibility and protection against the uncertainty, it may be reluctant to jeopardize this position to pay a large dividend.

Ability to Borrow

A liquid position is not only to provide for the financial flexibility and thereby protect against uncertainty. If a firm has the ability to borrow on comparatively short notice, it may be relatively financial flexible. The greater the ability of the firm to borrow, the greater its financial flexibility, and the greater its ability to pay the cash dividend with ready access to debt fund, management should be less concerned with the effect that cash dividend has on it liquidity.

Access to tire Capital Market

A company having the ability to liquidating can still pay dividend if it is able to raise debt or equity in the capital markets. It also provides flexibility in the financial position .of the firm, which in fact could meet the desires of the stockholders (dividend) as well as the firm's obligations. Capital market reputation of a firm-always make easy to raise funds and funds availability helps to meet both requirement as mentioned before.

Restriction in Loan Agreement

Lender may generally' put restriction on dividend payment to protect their interest when the firm is experiencing low liquidity or low profitability. As such the firm agrees as a part of a contract with a lender to restrict the dividend payment. Therefore when the restriction of this type is put, the company is forced to retain the earning and have low payout ratio. The newcomer firms and the firm having low liquidity and inefficient funds basically apply it.

Control

External financing, unless it is through a right issue, involves dilution of control. If external finance is raised through a public issue of equity capital, the existing shareholders will have to share control with new shareholders. Internal financing by the way of retained earnings, on the other hand, lends to no dilution of control. Hence, if the shareholders and the management of a company are averse to dilution of control, the firm should rely' more on retain earnings.

Taxes

As mentioned earlier dividend income be taxed with high percent rate. Similarly the divided income is added in the ordinary income and ordinary incomes are taxed in the higher rate than capital gain tax. Therefore if the principal shareholders of the firm are of high taxpayer, the form may retain more and vice-versa.

Investment Opportunities

A growing firm gives precedence to the retention of the earnings over the payment of dividend in order to finance its expansion activities. When the investment opportunities are occur infrequently, the company may not be justified in retaining the earnings at least during the periods when such opportunities exist. If the company retain earning during such periods the retain funds would either be re-invested in short-term securities yielding nominal return or remain ideal. This will have a impact of reducing the wealth of the shareholders. Thus the better course in such a case is to follow a policy of paying dividend and raises the external funds when investment opportunities occur. Two things have to-be considered:

- If the firm typically has large numbers of profitable investment opportunities, this will tend to produce a low target payout ratio and vice versa.

- The ability to accelerate or to postpone projects will permit a firm to adhere more closely it suitable dividend policy.

Inflation

Some company may have followed the policy of paying the high dividend wt the time of inflation in order to protect the shareholders from the erosion of the real value of dividend. But the company with falling result cannot follow this policy. This policy not only tries to suite the inflation but also in the lower economic growth it helps to create the capital market for the investment opportunities.

Difference in the Cost of External Equity or Retained Earning

The cost of external equity excepting that, which rose by the way of right issue, is higher than the cost of retain earning. Two factors cause these differences:

- Issuing cost

-        Earnings

The price at which the additional equity is offered to the public is lower than the prevailing market price. The magnitude of the cost differential between the external equity and retain earnings has bearing ion the relative proportions of equity and retain earnings used by the firm and hence on its dividend policy.

Dividend Stability

The financial manager must be concerned with the stability of dividend to investor by stability we mean maintaining a position in relation to a dividend trend line, preferably one that is upward sloping. If would appear that investors value stability. The stable dividend may convey the management's view that the future of the company is better than the drop in earnings suggests.

2.2   Review of Related Studies

2.2.1 Review of Major International Studies

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

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

Chawla and Srinivasan (1987) studied the impact of dividend and retention on share price. They took 18 chemicals and 13 sugar companies and estimated cross section relationship for the year 1969 and 1973. The required were collected from the official directory of Bombay stock exchange. The basic objectives of the study were:

) To estimate a model to explain share price, dividend and retained earning relationship.

) To test the dividend, retained earning hypothesis.

) To examine to the structural changes in the estimated relations overtime.

Achieve these objectives, they used simultaneous equation model as developed by Friend and Puckett in 1964 (Chawla and Srinivasan, 1987:137-140). The model in its unspecified form was as follows.

1.   Price Function

$$P_t = [D_t, R_t, (P/E) \, t - 1]$$

2.   Dividend Supply Function

$$D_t = [E_t, D_{t-1}, (P/E) \, t - 1]$$

3.   Identity

$$E_t = D_t + R_t$$

Where,

P   = Market price per share.

D   = Dividend per share.

R   = Retained earnings per share.

E   = Earning per share.

(P/E)1 = Deviation from the sample average of price Earning's ratio.

t   = Subscript for time.

As per the financial theories they expected the efficient of both dividend and retained earnings to be positive in the price equation. Similarly in the dividend supply function also they expected a positive sign for current earnings and previous dividend.

They took 18 Chemicals and 13 Sugar companies and estimated cross- sectional relationship for the years 1969 and 1973. The required data were collected from the official directory of Bombay stock exchange. They used two stage least square

techniques for estimation. They also used lagged earnings price ratio instead of lagged price earnings ratio, i. e. (P/E) t-1.

From the result of their two stage least square estimation, they found that in the case of chemical industry the estimation coefficients had the correct sign and the coefficient of determination of all equation were very high. it implies that the stock price and dividend supply variation can be explained by their independent variables.

But in case of sugar industry they found that the sign for retained earning is the negative in both years. So they left sugar industry for further analysis.

For chemical industry, they observed that the coefficient of dividend was very high as compared to retained earnings. They also found that coefficient of in dividend was significant at one percent level in both years, whereas coefficient of retained earning was significant at ten percent level in 1969 and at one percent level in 1973.

Finally, they included that the dividend hypothesis holds well in the chemical industry, both dividend and retained earning significantly explain the variations in share price in chemical industry. They also stressed that the impact of dividend is more pronounced than that of the retained earning but the market has started shifting towards more weight for retained earning (Chawla and Srinivasan, 1987:137-140).

Walter, (1996) study the relevant theory of dividend and argued that the dividend policy of the firm affects the value of the shares. So, the dividend is relevant. In those cases where firm announced an increase in their dividend, there is a significant positive reaction in their stock prices. Conversely, in those cases when the firm announced the decrease in their dividend, there is the significant negative reaction in their stock prices (Walter, 1996:29-41).

Walter's study is also based on relevant theory. James E. Walter, by his article,' dividend policies and common stock prices' in journal of finance in 1957, advocated that the choice of appropriate dividend policy almost always affect the value of the enterprises i.e. share value/price. Walter's study is also based on some assumptions:

⌡ The return on the firms' investment (R) and the cost of capital (Ke) are constant.

⌡ All earnings are either distributed as dividend or re-invested internally,

⟩   The value of the EPS and DPS remain unchanged,

⟩   The firm has an infinite life.

Value of the stock according to Walter can be calculated by the following equation:

$$P = \{D + R/k_e\ (E-D)\}/k_e$$

Where: P market price of an equity share

      D = DPS

      E = EPS

      R = the rate of return on the firm's investment

      K_e = market capitalization rate or cost of capital

Walter's focus is in internal rate of return (R) and the cost of capital (Ke) in determining the dividend policy with these two variables; he had tried to conclude some decisions. He therefore, had expected three conditions probably exist:

Condition 1(R>K)

When internal rate of return is greater than cost o capital, it will be better to retain all net profits. R exceeding K shows the firm's better performances to earn more than the shareholders are paid in their reinvestment (or hoped by them). The market value per share increases by decreasing the dividend in such situation. Moreover, the market value per share will be highest at zero dividends.

Condition 2(R <K)

When internal rate of return (R) is less than cost of capital (K); it advocates that the shareholders can earn a higher return by investing elsewhere. Increasing the dividend in this condition increases the market price per share. It is happened in the declining firm, generally. By distributing entire earning as dividend, the value of the shares will be at optimum level. The dividend payout ratio of 100 would be the optimum dividend policy.

Condition 3 (R = K)

If the internal rate of return equals to the cost of capital, the dividend payout does not affect the market value of the share. In this condition the market value of the share remains constant for the entire dividend payout ratio (even from zero to hundred).

This kind of firm is called normal firm. Therefore, there is no any optimum dividend policy for such firm.

Conclusion

(R>k) = Dividends are negatively correlated with stock price

(R<k) = Dividends are positively correlated with stock price

(R=k) = Dividend is indifferent to variation in the market price of the share.

Modigliani and Miller (1961) study and It was argued that dividend policy has no effect either on the price of a firm's stock or its cost of capital, that is, dividend policy is irrelevance. This theory was first introduced by Franco Modigliani and Merton Miller in 1961 and popularly known as M-M Approach. Through an article "dividend policy, growth and valuation of shares' they advocated that dividend policy does not affect the value of the firm i.e. dividend policy has no effect on the share price of the firm. The M-M approach focuses the irrelevant effect of dividend policy in the firm valuation arguing that, the value of the flint is determined only by -its basic earnings power and its business risk, thus, the value of the firm depends on the income from it assets and not on how this income is split between dividend and retain earnings (Van Horne, 2000:306-309).

M-M approach is based on the following assumptions:

) Perfect capital market in which all investors are rational. Information available to all at no cost, instantaneous transaction without costs, infinitely divisible securities and no investor large enough to affect the market price of the security,

) An absence of floatation costs on securities-issued by the firms,

) A world of no taxes,

) A given investment policy for the firm, no subject to change,

) Perfect certainty by every investor as to future investment and profits of the firm (hut M-M dropped this assumption later).

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

Market value/price of share:

The market value of share at the beginning of the period is equal to the present value of dividend paid at the end of the period plus at the market price at the end of the period i.e.

$$P_0 = D_1 + p_1 / 1 + K_e \dots\dots\dots\dots\dots\dots \text{(I)}$$

Where,

P_0 = market price at the beginning (zero period)

K_e = cost of equity capital (assumed constant)

D_1 = dividend per share to be received at the end of the period

P_1 = market price of the share at the end of the period

No external financing

Assuming that the firm does not resort to any external financing, the market value of the firm can be computed as follows:

$$nP_0 = n(d_1 + p_1) / 1 + K_e \dots\dots\dots\dots\dots\dots\text{(II)}$$

Where: n numbers of equity shares at zero periods.

New shares

Assuming that the retain earnings is not sufficient to finance the investment needs of the funds, in that case issuing new shares is the other alternative. Say inn is the number newly issued equity share at the price of P_1.

$$nP_0 = nd_1 + P_1 (n+m) - mP_1 / 1 + K_e \quad \dots\dots\dots\dots\dots\dots \text{(III)}$$

Where: n = no. of share at the beginning

m = no. of equity shares issued a the end of the period

Total numbers of shares

The issuing of new stock is determined by the amount of investment in period I not financed by retained earnings. The total numbers of new shares can be found out by the following way:

$$mP_1 = I - (E - nd_1) \dots\dots\dots\dots\dots\dots \text{(IV)}$$

Where:

mP_1 = the amount collected by issuing new shares

m = the numbers of shares

P_1 = price of shares

I = total new investment requirement

E = earning of the firm during the period

nd_1 = total dividend paid

$E-nd_1$ = retain earning

Conclusion

By substituting the value of mPl from equation (IV) to the equation (III), we find:

$$nP_0 \quad = nd_1 + P_1 \ (m+n) - I + E - nd_1/1 + K_e$$

$$= P_1 \ (m \pm n) - I + E/l + K_e$$

In such a way, M-M approach concludes its result, that there is no any role of dividend (d_1) in the above equation. So, Modigliani and Miller conclude that dividend' policy is irrelevant and dividend policy has no effect on the shares price.

Gordon (1963) explained that the dividend policy of a firm influences the value of a share. He said, a corporation's share price is not independent of the dividend rate. "Investor value, the present dividend more than future capital gains", was the focus of his study. That is to say current dividend is considered certain and risks less. Therefore, this theory is preferred by rational investors as compared to deferred in future, as future is uncertain, and the investors avoid uncertainty (Gordon, 1963:76).

He emphasized his argument that an increase in dividend payout ratio leads to increase in the share price for the reason that investors consider, the dividend yield (D_1/P_0) is less risky than the expected capital gain. Gordon's theory is also based on some assumptions:

i)   The firm is all equity firm and there is no leverage in its capitalization,

ii)   There is no outside financing and corporate goal is expected to derive from retain earnings,

iii)   The internal rate of return, (R) of the firms remain constant,

iv)   The cost of capital (K) for the firm remain constant,

v)   Corporate tax does not exist,

vi)   Retention ratio (b) once decided will remain constant,

vii)   The cost of capital for the firm is grater than the growth rate i.e. $K_e > G$.

Applying the assumption just prescribed, Gordon also presented an equation in order to find out market value per share as 'following:

P=E (1-b)/K$_e$-b*r

Where:

P = market value per share

E = earning per share

b = retention ratio or % of retain earnings

(I-b) = dividend payout ratio

K$_e$ = cost of capital

b*r = g or growth rate

E (1-b) = dividend per share

In Conclusion:

) Investors give more value to the current dividend than the future capital gain,

) Investors pose these views because they do not want to bear the future uncertainty rather the enjoying the current earnings (dividend)

) Payment of more dividends increases the market value of the share (i.e. investors find more dividend yield.)

Watt (1976) study of an annual dividend model is some how disagreed by Michael Laub. He disagrees with Watt's specification of an annual dividend model instead of a quarterly dividend model and with his conclusion that information content of dividend is trivial (Watts, 1976:81-85).

Laub placed his views by "Reinterpretation of Watt's study" and gave some empirical evidences for his argument. But Watt denied Laub's views and for the said, neither his (Laub's) evidence nor "Re-interpretation "indicates the superiority of a quarterly dividend model or the non-triviality of the information contents in dividend. It means the specification of the dividend-earning relationship is important and the result of any dividend information content study depends crucially on the approach used.

Watt's Interpretation

Ross Watt in his own way had interpreted quarterly versus annual dividend model and added:

) The accountants tend to base their accounting procedures for the calculation of the earnings on 1-year periods.

) The quarterly earnings often include in their calculations simple extrapolation of many of the preceding year's expenses.

) As a consequence, an expectation of future annual earnings based on quarterly earnings ma)'/will be less efficient than such an expectation base on annual earnings which that extrapolation are absent.

Therefore, it is the case; management may prefer to wait for the determination of annual earnings before changing regular dividends.

In regards to quarterly earnings, he further found a problem. The problem is that: There may be a seasonal component in those earnings and in order to interpret any change in quarterly earnings, an estimate must be made of seasonal component. It may encourage management to wait for annual earnings to determine whether to change dividends.

Watt pointed out, two third of the regular dividend changes and nine tenth of the extra dividend declarations occur in the first and last quarters which gives the evidence of management for annual dividend rather than quarterly model of Laub. Therefore, according to Watt, if Laub's dispute were valid, it would not affect stock price tests. Watt said in conclusion, nothing would cause Watt to change the conclusion of his paper.

Joseph and Itzhok had focused on two devices, which are used widely in the firms. The manager poses inside information about their firms' future prospects and for that purpose various signaling devices are used and information conveyed to the public. As mentioned above, the two devices are:

i) Earnings
ii) Dividends

The information content of dividend hypothesis asserts that managers use each cash dividend announcement to signal changes in their expectations about future prospects of the firm. The concentration about information broadly emphasized on the hypothesis that, since dividend decisions are almost solely at management's discretion, announcement of dividend changes should provide less ambiguous

information signal than earnings numbers, if dividend convey useful information to the public, the same effect can be seen in stock prices which are changed after public announcement (Harony and Swary, 1980:1-11). The main focus of this study (specifically) is to ascertain Tether dividend changes provide information beyond that already provided by quarterly earning numbers. These two people believe, dividend and earnings have signal effect in the practice and thinking of people with regards to the future prospects of the firm.

They have explained their arguments through data collection and analysis For their purpose, they had grouped the sample data according to the dividend changes from one quarter to the next and by the numbers of trading days between earnings and dividend announcement date in any given quarter.

The sample includes 2612 dividend announcement that follow (Panel A) and 787 that precede (Panel B) quarterly earnings announcement by 11 trading days among these:

384 - increases
47 - decreases
2968 - case of no change in dividend

Panel A

)   This includes those companies, which announce dividend with no changes

)   Stockholders of such companies earned on average

)   Only normal returns as predicted from the market model over the 20 days surrounding the announcement dates

)   The cumulative effect of the abnormal returns during this period is of small magnitudes

)   The average return do not defer significantly from zero. These results are similar whether earnings announcement precede or follow dividend announcement.

Panel B

)   Shareholder of the companies that announced increases realized on average

)   Positive abnormal returns over the 20 days surrounding announcement dates

)   Most of the statistically significant abnormal returns occurred during days A.D.-1 & A.D.

Moreover, they are of similar magnitude for both groups whether earnings announcement precede or follow dividend announcement. Therefore, one noticeable result is that abnormal returns for the deceases occurred during the day AD.- 1 and A.D and they are of similar magnitude for both groups. The capital market reaction to dividend announcement like this support the information content of dividend hypothesis, namely that changes in quarterly cash dividends do provide information about changes in management's assessment of future prospects of the firm.

The study also focuses or emphasizes the quarterly dividend announcement contain useful information beyond that already provided by quarterly earning numbers. Both writers believe that ever earning announcement also affect the market price of the share. For this purpose, stock prices just before and after announcement were taken to analyze. In the same way, our practice is also none other than "Announcement of increase in earnings causes increase in market price of the share and vice-versa".

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

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

)   The payout ratio forecasts return because the level of earning forecasts return.

Conclusion of the Study

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

i)   Dividend contains information about future returns because they help measure the value of future dividends while earnings contain information because they are corrected business conditions.

ii)   Both high current prices and high current earnings forecast low future returns

iii)   Using earnings yield alone to forecast return is a bad idea

iv)   High dividends forecast high future returns so using dividend yield alone to forecast return are more successful

v)   Dividend price by any smooth accounting variable capturing normal growth produces roughly the same forecasting variables.

Van Horne and Mc Donald (1971) conducted a most comprehensive study on dividend policy and new equity financing. The purpose of this study was to investigate the combined effect of dividend policy and new equity financing on the market value of the firms common stocks. They are using a well-known valuation model, i.e. cross-section regression model. The required data are collected from 86 Electric utility firm's included on the COMPUSTAT utility data tape and 39 firms in the Electronics and Electronic – component industries as listed on the COMPUSTAT industrial data tape and 39 firms in the Electronic – Component industries as listed on the COMPUSTAT industrial data tape.

By using different models or methodology they compared the results obtained for firms which both pay dividends and engage in new equity financing with other firms in an industry sample, They concluded that for electric utility firm in 1968, share value is not adversely affected by new equity financing in the presence of cash dividend, except for those firms in the highest new issue group and it makes new equity a more costly form of financing than the retention of earnings. They also indicate that the payment of dividend through excessive equity financing reduce share prices. For electronics, electronic component industry a significant relationship between new equity financing and value was not demonstrated (Van Horne and Donald, 1971:507-519).

2.2.2 Review of Nepalese Studies

There are few studies made in context of Nepal with regards to dividend and stock prices, because of information lack and lack of experts, the studies is limited in this regards. Even though, some studies are made which are going to be reviewed here.

Pradhan (1993) studied in stock market behavior in Nepal. The data were collected from 17 enterprises covering the year of 1986-1990. Following findings were observed in connection with dividend behavior:

⟩ Higher the earnings on the stock leads the larger the ratio of dividend per share

⟩ Stocks with larger ratio of dividend per share to the market price per share have higher liquidity, liquidity position of the stock, paying lower dividend is also more variable as compared to the stock paying higher dividend

⟩ Stock with larger ratio of dividend per share to market price per share have higher liquidity

⟩ Positive relationship between the ratio of dividend peer share to market price per share and interest coverage ratio

⟩ Dividend per share and market price per share was positively correlated

⟩ Positive relationship between dividend payout and liquidity

⟩ Positive relationship between dividend payout and profitability

⟩ Positive relationship between dividend payout and turnover ratio

⟩ Positive relationship between dividend payout and -interest coverage.

K.C (1995) study entitled "Dividend Policy of joint Venture Bank in Nepal". The study had covered the period of 1988/89 to 1993/94 with the following objectives:

i) To provide conceptual framework of dividend models

ii) To analyze the financial variables affecting the stock value and interpret the dividend paying implication under dividend valuation model and

iii) To provide suggestions, which will give vision for determination and espousal of dividend policy of joint venture banks (K.C., 1995)

The summary of the major findings of the study were as follows:

1. The earnings per share of all joint venture banks were raised satisfactorily

2. There was correlation between EPS and DPS

3. Amount of cash dividend had been raising each year

4. The P/E ratio, earning yield, dividend yield percentage exposed cyclical behaviour

5. P/E ratio was fluctuated in smaller proportion

6. The market value per share of joint venture banks stocks in security exchange center were significantly fluctuated and trading on high price

7. Joint venture banks in Nepal were seen as growth banks because actual capitalization rate (r) is higher than the normal capitalization rate (k) which is r>k,

8. Under CAPM the Beta Risk of joint venture banks were less riskier

9. Cash dividend per share (CDPS) of joint venture banks were significantly increasing in each year

10. The annual average growth rate in CDPS of NABIL and NISBL and NGBL were recorded as 35.0 %, 5 1.7% and 100.0% respectively.

Manadhar, (2000) study on entitled "Preliminary test of lagged structure of dividend empirical test case of corporate firm in Nepal". The main objective of the study is to set test whether Nepalese corporate firms consider the lagged earnings and dividend paid to pay the dividend in current year. To test this problem he has consider 17 corporate companies as samples and set different hypothesis and drawn the following conclusions:

⟩ There is significant relationship between the change in dividend policy in terms of DPS and change in lagged earnings,

⟩ In overall there is positive relationship between change in lagged consecutive earnings and dividend per share.

⟩ There is relationship between distributed lag profits and dividend,

⟩ When change in lagged consecutive earnings is greater than zero, in 65% the case change in dividend per share,

⟩ Overall increase in EPS (t) has resulted to increase in the dividend payment in 66.6% of the cases while decrease in EPS resulted decrease in dividend payment,

⟩ Nepalese corporate firms have followed the practice of maintaining constant dividend payment per share,

⟩ Corporate firm do not take into account one year or two year lagged earnings

Subedi (2004) in his study has covered the period of 1997-2003 with the total observation of 47 firms in financial sector & 30 in non-financial sector. The basic objectives of the study are:

⟩ To analyze the properties of portfolio forms on dividends

)   To examine the relationship between dividend and stock price

)   To survey the opinion of financial executives on corporate dividend practices

The main findings of the study are:

)   Stocks with larger ratio of dividend per share to book value per share have higher liquidity

)   Stocks with larger ratio of dividend per share to book value per share have higher profitability

)   Positive relationship is there between the ratio of dividend per share to book value per share and turnover ratio

)   There is positive relationship between the ratio of dividend per share to the book value per share and interest coverage ratio

)   There is positive relationship between dividend payout ratio and current ratio whereas the negative relationship between dividend payout and quick ratio

)   There negative relationship between dividend payout and the earnings before tax to net worth

)   There is positive relationship between dividend payout and interest coverage ratio

)   The stocks with larger ratio of divided per share to market price per share have higher liquidity

)   The stocks with larger ratio of divided per share to market price per share have lower leverage ratio

)   The stocks with larger ratio of divided per share to market price per share have higher earnings

He using the primary data focuses on earning announcement helps to increase the market price per share.

Khanal (2006) has conducted a thesis on "Share market in Nepal" through some light on dividend performance of the companies. This thesis indicates the following findings:

)   Many companies were paying less than the expected cash dividend per share of the investors. Most companies were under rating the expectation of

investors and they are by the low marketability of shares on trading floor of the stock exchange.

J   There were miss match between calculated price and quoted price of the share observed only one calculated price of share was near the actual price of share. It clearly signals over pricing of the share and market price were guided by technical factors

J   Most of the companies displaying the lower price earning ratio

J   Wide gap was recorded in the percentage of cash dividend paid by the listed public listed ltd. Companies.

J   The expected percentage of dividend of investors was not matching with the actual percentage. So, majority of the companies declaring less percentage than the risk free of return plus risk premium are unable to maintain investor's psychology in marketing.

Pokharel (2007) in his thesis paper entitled "Dividends and stock prices: An empirical study", he used multiple regression model of three independent variables. Besides this he also tried to highlight the relationship between stock price and other independent variables setting separate simple linear regression equations. The sectors chosen for the study were manufacturing and trading sector and banking and insurance sector. The major findings of the study were as follows:

1.   The relationship between dividend per share and stock price is positive
2.   Dividend per share affect the stock price variedly in different sectors
3.   Changing the dividend policy or dividend per share might help to increase the market price of the share
4.   The relationship between stock price and retained earnings per share is not prominent
5.   The relationship between stock prices and lagged earnings prices ratio is negative.

Kafle (2008) in his thesis entitled "Dividend Policy of Joint Venture Bank in Nepal" had covered the period of 2002/03 to 2006/07 with the following objectives:

a)   To provide conceptual framework of dividend models
b)   To analyze the financial variables affecting the stock value and interpret the dividend paying implication under dividend valuation model and

The major findings of the study were as follows:

-) The earnings per share of all joint venture banks were raised satisfactorily
-) There was correlation between EPS and DPS
-) Amount of cash dividend had been raising each year
-) The P/E ratio, earning yield, dividend yield percentage exposed cyclical behaviour
-) P/E ratio was fluctuated in smaller proportion
-) The market value per share of joint venture banks stocks in security exchange center were significantly fluctuated and trading on high price
-) Joint venture banks in Nepal were seen as growth banks because actual capitalization rate (r) is higher than the normal capitalization rate (k) which is r>k,
-) Under CAPM the Beta Risk of joint venture banks were less riskier
-) Cash dividend per share (CDPS) of joint venture banks were significantly increasing in each year
-) The annual average growth rate in CDPS of NABIL and NSBIL and NGBL were recorded as 35.0 %, 5 1.7% and 100.0% respectively.

Sharma (2008) in his thesis entitled "Dividends and stock prices: An empirical study", he used multiple regression model of three independent variables. The objectives of his study are:

-) To examine the relationship between dividend and stock price
-) To survey the opinion of financial executives on corporate dividend practices
-) To study the relationship between stock price and other independent variables

Besides this he also tried to highlight the relationship between stock price and other independent variables setting separate simple linear regression equations. The sectors chosen for the study were manufacturing and trading sector and banking and insurance sector.

The major findings of the study were as follows:

-) The relationship between dividend per share and stock price is positive
-) Dividend per share affect the stock price variedly in different sectors

-) Changing the dividend policy or dividend per share might help to increase the market price of the share
-) The relationship between stock price and retained earnings per share is not prominent
-) The relationship between stock prices and lagged earnings prices ratio is negative.

Rajbhandari (2008) study on entitled dividend policy: Comparative study of three joint ventures banks from 2002 thorough 2007. The main objectives of his study are:

-) To identify the type of dividend followed by banks.
-) To examine the impact of dividend on stock price.
-) To identify the relationship between DPS and other financial indicator
-) To know the uniformly among DPS, EPS and DPR of the sample banks. Following are the finding of his study.
-) No clearly defined dividend policy is found followed by the sample banks.
-) No significant relationship between DPS and other financial indicators.
-) No uniformly in EPS but prominent difference in DPS and DPR

At first, number of samples selected for the study are small i.e. only three banks are selected, it would not be reasonable to quote dividend policy is bad or good by comparing three banks only.

Secondly, there are many factors, which affect the dividend policy. These are DPS, EPS. MPS, DPR, last year dividend paid, liquidity. Net worth but the used only a few financial factors among then therefore, validity of the result is not worthwhile.

Similarly his main findings are:

-) Average earning per share seems satisfactory of all sample companies.
-) The positive relationship between dividend per share and earning per share
-) The co-efficient of correlation between Earning per share and market price to the negative.
-) The relationship between market price per share and dividend is positive
-) Dividend payment is not consistency of all six sample companies

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)   The institution does not seem to follow the optimal dividend policy of paying regular dividend as per shareholders expectation and interest.

Aryal (2009) has conducted a research work on "Dividend policy: comparative study between NABIL bank and Standard Chartered Bank Nepal Limited. He analyzed the data of these two banks for the year 2003/04 to the year 2007/08. The objectives of this study were as follows.

)   To test the relationship between dividend per share and stock prices.
)   To determine the impact of dividend policy on stock prices.
)   To identify whether it is possible to increase the market value of the stock changing dividend policy
)   To identify the relationship between DPS and other financial indicator

Following are the findings of his study:

(i)   The relationship between dividend per share with Earning per share, net profit, net worth and stock prices are positive

(ii)   Market price per share is affected by dividend decision, if change in Dividend per share

(iii)   There is not uniform dividend policy in both the banks

(iv)   The relationship between dividend per share and stock price is positive in the sample companies.

(v)   Dividend per share affects the share prices.

(vi)   Change in dividend policy or DPS might help to increase the market prices of shares.

(vii)   The relationship between stock prices and lagged carryings price ratio in negative.

(viii)   The relationship between stock prices and retained earning per share is not prominent

2.3 Research Gap

These research works were somewhat different by means of scope, objectives and sample firms than the present research work as well as time frame of the research

conducted. Due to the long time frame, past research samples does not represent the contemporary population. So, present research work performed may be taken, as a further step in the chosen field is the hope of researcher. The finding of this research work has been included in related chapter later. From the above all studies conducted by various researcher, it seems that all joint venture banks are developed stage and they are facing various challenges. Further more it also shows that there are very few research works conducted about the dividend policy. This study is based on different variable and tools using commercial banks and newly data (2003/04 to 2008/09). Researcher focuses only the dividend policy and its effect on market price of share of selected banks. This study will be fruitful to those interested person, researchers, students, teachers, businessmen and government for academically as well as policy perspectives.

CHAPTER THREE
RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problems. It refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objects in views.

The basic objective of this study is to explain, test and analysis of dividend policy and its impact on market price of stock reference to listed commercial banks in Nepal, therefore some systematic research methodology has been used. This study is based on secondary data. This chapter describes the methodology employed till the entire study has been conducted.

3.1   Research Design

Research Design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions (Kerlinger, 1978). The research design basically followed the comparative evaluation of dividend policy in the sample banks and their effect on stock prices. Analytical and descriptive approaches are used to evaluate the dividend policy' of the sample banks. The points are discussed basically' on the basis of secondary data, financial statements of six years from 2003/04 to 2008/09 was taken for commercial banks from respective banks and Nepal stock Exchange.

3.2   Population and Samples

There 26 commercial banks operating in Nepal whose shares are traded actively in stock exchange; hence, it is not possible to study all of them regarding the study topics. Therefore sampling was done selecting from population. The population is as follows:

1. Nepal Bank Limited

2. Rastriya Banijya Bank

3. NABIL Bank Limited

4. Nepal Investment Bank Limited

5. Standard Chartered Bank Limited

6. Himalayan Bank Limited

7. Nepal SBI Bank Limited

8. Nepal Bangladesh Bank Limited

9. Everest Bank Limited

10. Bank of Kathmandu Limited

11. Nepal Credit & Commerce Bank Limited

12. Nepal Industrial and Commercial Bank Limited

13. Lumbini Bank Limited

14. Machhapuchchhree Bank Limited

15. Kumari Bank Limited

16. Laxmi Bank Limited

17. Siddhartha Bank Limited

18. Agriculture Development Bank Limited (ADB)

19. Global Bank Limited

20. Citizen Bank Limited

21. Prime Bank Limited

22. Bank of Asia Limited

23. Sunrise Bank Limited

24. NMB Bank Ltd.

25. Development Credit Bank Ltd

26. Kist Merchant Bank Limited

The samples are based on joint venture commercial banks in the early 1980's and after 1990's. The samples to be selected are as follows.

a) Nabil Bank Ltd.(NABIL)

b) Himalayan Bank Ltd.(HBL)

c) Bank of Kathmandu Limited (BOKL)

d) Nepal SBI Bank Ltd.(SBI)

e)   Everest Bank Ltd.(EBL)

f)   Nepal Bangladesh Bank Ltd (NBBL)

3.3   Source and Technique of Data Collection

All the analysis is based on secondary data. In this study data are collected from different sources: Nepal stock Exchange, website plus the respective banks' central office. From these organizations, annual reports are collected and some related information is taken from Economic Survey and relevant to the study. For the purpose of analysis of data six years were taken as sample from 2003/04 to 2008/09.

3.4   Data Analysis Tools

For the purpose of analysis, two tools/techniques are used. They are as following:

-      Financial tools
-      Statistical tools

(A)   Financial Tools

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

i)   Earning Per Share (EPS)

EPS is calculated to know the earning capacity and to make the comparison between the commercial banks and manufacturing companies according to their respective sectors. EPS defined as the result received by dividing net profit after taxes by number of common stock outstanding. In equation:

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

ii)   Dividend Per Share (DPS)

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

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

iii)   Dividend Payout Ratio (D/P ratio)

D/P ratio is calculated to indicate percentage of the profit on share that is distributed as dividend. The following equation is solved to calculate the D/P ratio:

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

iv)   Market Price Per Share (MPS)

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

1.   Statistical Tools

I)   Arithmetic Mean

Arithmetic mean of a given set of observation is their sum divided by the number of observation. In general X_1, X_2 …… X_3 are the given "n" observations, than their arithmetic mean, usually denoted by $\overline{X}$ is given by:

$$\overline{X} = \frac{fX_1 \ulcorner X_2 \ulcorner .... X_n A}{n}$$

or, $\overline{X} = \dfrac{X}{n}$

Where $\overline{X}$ denotes mean. X_1, X_2 and X_n are given set of observations and n denotes number of items observed.

II. The Coefficient of Variation (CV)

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

In Symbol

$$CV = \frac{S.D.}{\overline{X}} \mid 100$$

Where: S.D. Standard Deviation

$\overline{X}$ = Mean average

The higher CV denotes to the higher variability of variable and vice- versa.

III. Standard Deviation (S.D.)

The measurement of the scatterness of the mass of figures in a series about an average is known as dispersion. The standard deviation means the absolute dispersion. The greater amount of dispersion greater the standard deviation will be. A small standard deviation means high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just opposite.

In Symbol

$$S.D. = \sqrt{\frac{x^2}{n} Z \frac{x}{n}^2} \text{ or } \sqrt{\frac{F \int X Z \overline{X} \hat{A}}{N}}$$

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 two sets of figures. It is the square root of the coefficient of determination. Correlation coefficient can either be positive or it can be negative. If both variables are changing in the same direction, the correlation is said to be positive but when the variations in the two variables take place in opposite direction, the correlation is termed as negative. In this study, coefficient of correlation is calculated between stock prices and dividends, stock prices and retained earnings, stock prices and lagged earning.

In symbol,

$$r = \frac{n\ \Sigma XY - \Sigma X \cdot \Sigma Y}{\sqrt{[n\ \Sigma X^2 - (\Sigma X)^2]\,[n\ \Sigma Y^2 - (\Sigma Y)^2]}}$$

$$\text{Probable Error (r)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

V. Coefficient of (Multiple) Determination (R^2)

The coefficient of determination is a measure of degree (extent or strength) of linear association or correlation between two variable, one of which happens to be independent and other being dependent variable(s). In other words, R^2 measures the percentage total variation in dependent variable being explained by independent variable. The coefficient of determination can have value ranging from zero to one. Value of one can occur only if the unexplained variation is zero, which simply means that all the data points in the scatter diagram fall exactly on the regression line. In this study; R^2 is calculated as the requirement of model.

$$r^2 = \frac{\text{Explained variation}}{\text{Total variation}}$$

$$r^2 = \frac{a\ \Sigma Y + b\ \Sigma XY - N\overline{Y}^2}{\Sigma Y^2 - N\overline{Y}^2}$$

VI. Regression Equation

Regression analysis is concerned with the study of the relationship between one variable called the explained or dependent variable and one or more other variables called independent or explanatory, variables. There are two types of regression analysis. One is called simple linear regression analysis, which is concerned with the study of the relationship between one variable called the dependent or explained variable and one other variable called independent or explanatory variable. Other is called multiple linear regression analysis, which is concerned with the study of the relationship between one variable called the dependent or explained variable and more than one other variable called independent or explanatory variable. The regression analysis submits the following two concepts:

3.5 Regression Model Used

In this study the following simple and multiple regressions have been used to analyze and test the relationship between dependent and independent variable(s). The simple regression is used to study, the particular one dependent and one independent variable's relationship. The following linear regression equation has been applied in this study:

1. Simple Regression Analysis:

a) $y_1 = a + bx_1$ **b) $y_2 = a + bx_2$**   **c) $y_3 = a + bx_3$**

y_1 = MPS y_2 = MPS y_3 = DPS

x_1 = DPS x_2 = EPS x_3 = EPS

a & b are constant &   a & b are constant &   a & b are constant &

regression coefficient   regression coefficient   regression coefficient

2. The Multiple Regressions are as following:

a)   Regression Equation no 1: $D_t = a + b_1 E_t + b_2 D_{(t-1)}$

where: D_t = DPS at time t

E_t = EPS at time t

$D_{(t-1)}$ = Lagged DPS

a, b_1 & b_2 are constant & regression coefficients

b)   Regression Equation no. 2: $P_t = a + b_1 D_t + b_2 E_t$

where: P_t = MPS at time t

D_t = DPS at time t

E_t = Price earning ratio at time t

a, b_1 & b_2 are constant & regression coefficients

a)   Regression Constant (a)

The value of constant, which is intercept of the model, indicates the average level of dependent variable when independent variable (s) is (are) zero. In other words, it is better to understand that a (constant) indicates the mean or average effect on dependent variable if all the variables omitted from the model.

b)   Regression Coefficient (b)

The regression Coefficient of each independent variable indicates the marginal relationship between that variable and value of dependent variable, holding constant the effect of all other independent variable in the regression model. In other words, the coefficients describe how changes in independent variables affect the values of dependent variable's estimate.

VII.   Standard Error of Estimate (SEE)

With the helps of regression equations perfect prediction is practically impossible. Standard error of estimate is a measure of reliability of the estimating equation indicating the variability of the observed points around the regression line, that is the extent to which observed values differ from their predicted values on the regression line. The smaller the value of SEE, the closer will be the dots to the regression line & the better the estimates based on the equation for this line. If SEE is zero, then there is no variation about the line and the correlation will be perfect. Thus with the helps of SEE, it is possible for us to ascertain how well and representative the regression line is as a description of the average relationship between two series.

In symbol,

$$SEE = \sqrt{\frac{Un\,exp\,lained\ var\,iance}{N\,Z2}}$$

VIII.   t-Statistics

To test the validity of our assumption, if sample size is less than 30, t-test is used for applying t-test in the context of small sample, the "t" value is calculated first and then compared with the table value of 't' at a certain level of significance fore given degree of freedom (in this study the 't' value are computed with the help of computer). If the calculated value of 'f' exceeds the table value (say t 0.05), we infer that the difference is significant at 5% level but if "t" value is less than the concerning table value of the "t" the difference is not treated as significant.

$$t = \frac{\overline{X1}\,Z\,\overline{X}_2}{\sqrt{S^2\ \dfrac{1}{n_1}\,\Gamma\,\dfrac{1}{n_2}}} \quad \text{where, } S^2 = \frac{n_1 s_1^{\,2}\ \Gamma\,n_2 s_2^{\,2}}{n_1\ \Gamma\,n_2\ Z2}$$

IX. F-Statistic

To test the validity of the assumption, f-test is also used. The difference between two-sample mean can also be studied through f-test. F- Test. i.e. the technique of analyzing variance enables to test the significance of difference between two sample means. Using this technique, one will be able to make inferences about whether his/her regression equation provides statistically significant result or not.

X. Test of Hypothesis

A hypothesis is a conjectural statement of the relationship between two or more variables. Hypothesis statement should be able to show the relationship between variables. At the same time, they should carry clear implications for testing the stated relations. The research on this thesis topic strongly holds that the hypothesis, formulated, meet the above-mentioned criteria. The hypothesis of this research work is as follows.

a)   Hypothesis First :

Null Hypothesis (Ho): There is no significant difference in Dividend per share of sample banks.

Alternative Hypothesis (H1): There is significant difference in dividend per share of sample banks.

 b)   Hypothesis Second :

Null Hypothesis (H0): There is no significant difference in Earning per share of sample banks.

Alternative Hypothesis (H1): There is significant different in Earning per share of sample banks.

   c) Hypothesis Third:

Null Hypothesis (H0): There is no significant difference in Market price per share of sample banks.

Alternative Hypothesis (H1): There is significant difference in Market price per share of sample banks.

CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

Chapter one has been introduced subject matters and objectives of this study. In order to achieve those objectives necessary analytical tools and techniques have been discussed under chapter of research methodology. In this chapter relevant data have been presented and analyzed with reference of dividend practices of joint venture banks. This chapter includes five sub-headings, at first analysis of financial indicators and variables are presented. The simple and multiple regression analysis are the next two sub-headings. Lastly the test of hypothesis and major findings are presented. Therefore this chapter is based on the presentation and analysis of the secondary data, which help to conclude and draw some recommendations.

4.1 Analysis of Financial Indicators and Variables

4.1.1 Analysis of EPS

Earning per Share (EPS) is one of the most important financial indicators, which measure the earning capacity of a firm. It measures the profit available to the ordinary shareholders on a per share basis. EPS is calculated by dividing net income available to the common stockholders by the total number of common shares outstanding. The following table shows the EPS of the sample firms.

Table 4.1

Analysis of EPS

Year	BOKL	NBBL	NABIL	HBL	EBL	SBI
2003/04	2.0	18.41	55.25	60.26	32.91	9.61
2004/05	17.72	19.87	84.66	49.54	29.90	11.47
2005/06	27.50	0.74	92.61	49.05	45.58	14.25
2006/07	30.5	0.60	83.78	83.08	34.39	41.74
2007/08	40.6	1.36	84.66	49.45	29.90	11.74
2008/09	45.0	2.50	88.5	56.5	35.60	20.50
Total	163.32	43.48	489.46	347.88	208.28	109.31
Mean	27.22	7.25	81.58	57.98	34.71	18.22
S.D	15.70	9.25	13.31	13.12	5.80	12.13
C.V	57.67	127.62	16.32	22.63	16.72	66.58

Source: Nepal Stock Exchange, 2004-2009.

Table 4.1 shows the EPS of BOKL, NBBL, NABIL, HBL, EBL and SBI is in fluctuating trend through out the study period. The maximum EPS of BOKL, NBBL and NABIL are Rs. 45.0, Rs. 19.87 and Rs. 92.61 respectively in year 2008/09, 2004/05 and 2005/06. The maximum EPS of HBL, EBL and SBI are Rs. 83.08, Rs. 45.58 and Rs. 41.74 respectively in year 2006/07, 2005/06 and 2006/07. Similarly minimum EPS of BOKL, NBBL and NABIL is seen in year 2003/04, 2006/07 and 2003/04. On the other hand, minimum EPS of HBL, EBL and SBI are in year 2005/06, 2004/05& 2007/08 and 2003/04 respectively.

The mean EPS for BOKL, NBBL and NABIL stand for Rs. 27.22, 7.25 and 81.58 respectively where as mean EPS for HBL, EBL and SBI stand for Rs. 57.98, 34.71 and 18.22 respectively. It shows that the highest mean EPS is in NABIL and lowest in NBBL. Likewise the coefficient of variation (CV) of EPS of BOKL, NBBL, NABIL, HBL, EBL and SBI are 57.67%, 127.62%, 16.32%, 22.63%, 16.72% and 66.58% respectively. It has indicated that the variability of EPS of NABIL is less than that of BOKL & NBBL and in the same way variability of EPS of EBL is less than that of HBL & SBI. Among the sample firms CV is highest in NBBL and lowest in EBL.

Figure 4.1: EPS of BOKL, NBBL, NABIL HBL, EBL and SBI
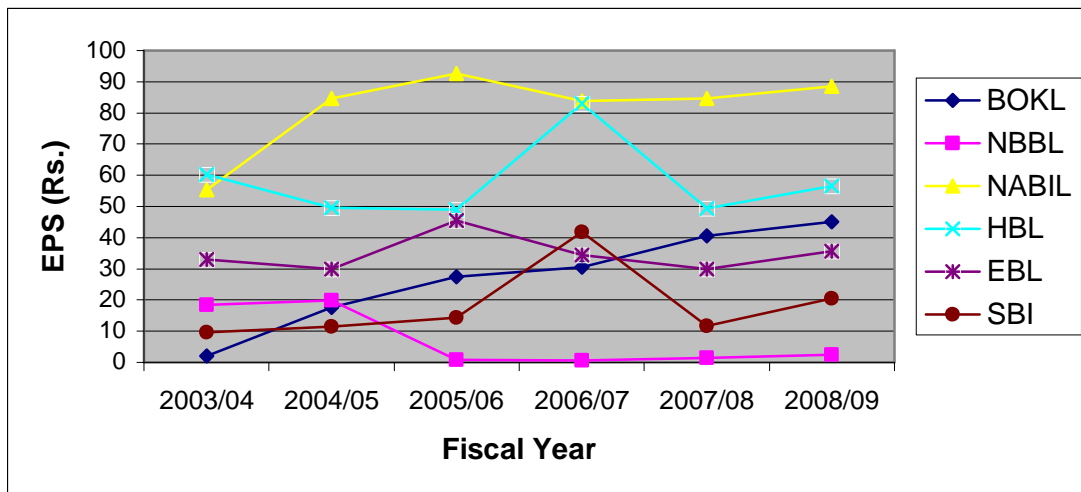
Thus, the analysis of EPS trend shows that average EPS in NABIL is greater than NBBL & BOKL; on the other hand average EPS in HBL is greater than EBL & SBI. It indicated the profitability of NABIL and HBL common shareholders investments are better than NBBL, BOKL, EBL and SBI respectively.

4.1.2 Analysis of DPS

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

Table 4.2

Analysis of DPS

Year	BOKL	NBBL	NABIL	HBL	EBL	SBI
2003/04	10	0	50	1.32	20	8
2004/05	5	0	65	20	20	0
2005/06	10	0	70	11.5	20	0
2006/07	15	5	85	30	25	5
2007/08	18	0	100	15	10	10
2008/09	20	0	100	15	10	10
Total	78	5	470	92.82	105	33
Mean	13	0.83	78.33	15.47	17.5	5.5
S.D	5.65	2.041	20.16	9.46	6.12	4.63
C.V	43.51	244.95	25.74	61.19	35.0	84.30

Source: Nepal Stock Exchange, 2004-2009.

Table 4.2 shows that dividend per share of all the sample firms are in fluctuating trend except EBL and SBI. The highest dividends of Rs. 20 paid in year 2008/09 by BOKL, Rs. 5 by NBBL in 2006/07 whereas NABIL has paid highest DPS (Rs. 100) in year 2007/08. On the other hand HBL has paid highest DPS (Rs. 30) in year 2006/07, EBL has paid highest dividend in year 2006/07, SBI has paid it in year 2007/08. The mean DPS of BOKL, NBBL, NABIL, HBL, EBL and SBI are Rs,. 13.0, 0.83, 78.33, 15.47, 17.5 and 5.5 respectively. It shows that the mean DPS of NABIL and HBL are greater than BOKL, NBBL EBL & SBI respectively. Likewise the coefficient of variation (CV) of NABIL and EBL are lesser than NBBL, BOKL and SBI respectively.

Figure 4.2: DPS of BOKL, NBBL, NABIL HBL, EBL and SBI
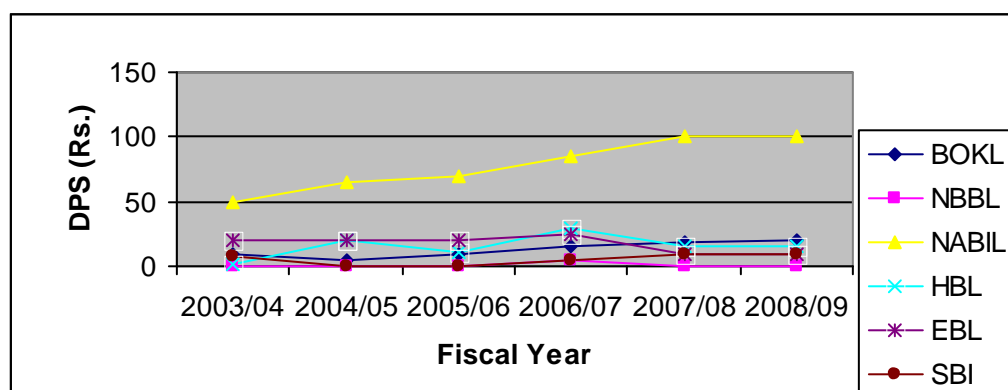
Thus, the analysis of the DPS trend shows that average dividend per share paid by NABIL and HBL are greater than NBBL & BOKL and EBL & SBI respectively in their respective groups. Higher dividend per share creates positive attitude of the shareholders toward the NABIL and HBL, which consequently helps to increase the market value of the shares. It is the indicator of better performance of the bank. In this regard, BOKL and HBL are better than NBBL & NABIL and EBL & SBI respectively.

4.1.3 Analysis of D/P Ratio

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

Table 4.3
Analysis of D/P Ratio

Year	BOKL	NBBL	NABIL	HBL	EBL	SBI
2003/04	5	0	0.90	0.02	0.60	0.83
2004/05	0.28	0	0.76	0.40	0.66	0
2005/06	0.36	0	0.75	0.23	0.43	0
2006/07	0.49	8.33	1.01	0.36	0.72	0.12
2007/08	0.44	0	1.18	0.30	0.33	0.85
2008/09	0.44	0	1.12	0.26	0.28	0.48
Total	7.02	8.33	5.75	1.58	3.05	2.29
Mean	1.17	1.38	0.95	0.26	0.50	0.38
S.D	1.87	3.40	0.18	0.13	0.18	0.39
C.V	160.33	244.94	18.79	50.62	36.20	104.41

Source: Nepal Stock Exchange, 2004- 2009.

Figure 4.3: D/P Ratio of BOKL, NBBL, NABIL HBL, EBL and SBI
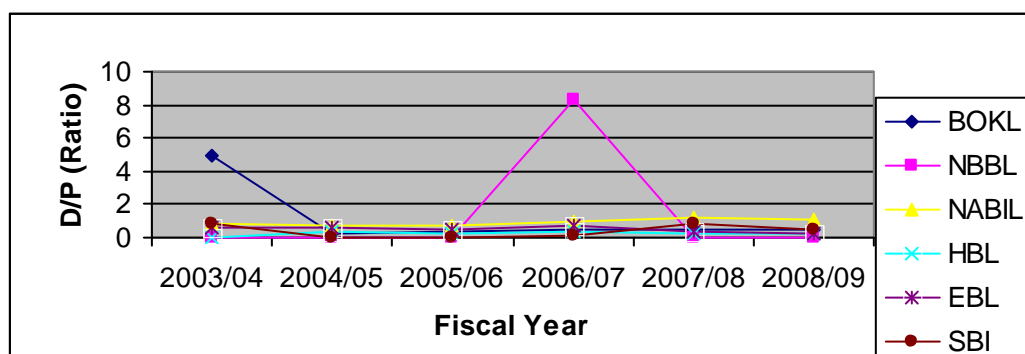
Table 4.3 shows that the average dividend payout ratio of BOKL, NBBL, NABIL, HBL, EBL and SBI are 1.17, 1.38, 0.95, 0.26, 0.50 and 0.38 respectively. It indicates the D/P ratio of BOKL and NBBL are higher than EBL, NABIL, HBL and SBI respectively in their respective groups. Highest percentage of dividend payout ratio of BOKL and NBBL are 0.49 and 8.33 in year 2006/07. Similarly, for NABIL, HBL, EBL and SBI highest D/P ratio is in year 2007/08 (1.18), 2004/05 (0.40), 2006/07 (0.72) and 2007/08 (0.85) respectively.

The coefficient of variation (CV) of dividend pay ratio of NABIL (34.03%) is higher than SBI (140.80%). Thus, the analysis of dividend payout ratio trend shows that the NABIL D/P ratio to common shareholders is much better than SBI.

The coefficient of variation (CV) of dividend payout ratio of NBBL (244.94%), BOKL (160.33%) are higher than NABIL (18.79%). Similarly dividend payout ratio of HBL (50.62%) and EBL (36.20%) are lesser than SBI (104.41%) respectively. Thus the analysis of dividend payout ratio trend shows that the NABIL, HBL and EBL D/P ratio to common shareholders are much better than NBBL, BOKL and SBI respectively.

4.1.4 Analysis of MPS

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

Table 4.4

Analysis of MPS

Year	BOKL	NBBL	NABIL	HBL	EBL	SBI
2003/04	254	1700	510	836	445	255
2004/05	295	1019	1000	840	680	307
2005/06	430	360	1505	920	870	335
2006/07	850	290	2240	1100	1374	612
2007/08	1375	550	5050	1760	2430	1176
2008/09	2350	1001	5275	1980	3132	1511
Total	5554	4920	15580	7436	8931	4196
Mean	925.66	820	2596.66	1239.33	1488.5	699.33
S.D	816.20	531.44	2069.53	502.63	1070.11	524.92
C.V	88.17	64.81	79.70	40.55	71.89	75.06

Source: Nepal Stock Exchange, 2004- 2009.

Table 4.4 shows that the average yearly market price of stock (MPS) in BOKL, NBBL, NABIL, HBL, EBL and SBI are Rs. 925.66, 820, 2596.66, 1239.33, 1488.5 and 699.33 respectively. The highest market price of BOKL (Rs. 2350) is in the year 2008/09 and lowest (Rs. 254) in the year 2003/04 where as highest market price of NBBL (Rs.1700) is in the year 2003/04 & lowest (Rs.290) in the year 2006/07 and highest market price of NABIL (Rs. 5275) is in the year 2008/09 & lowest (Rs. 510) in the year 2003/04. Similarly the highest and lowest MPS of HBL (Rs. 1980 and 836) are in the year 2008/09 and 2003/04 respectively. On the other hand, highest and lowest MPS of EBL (Rs. 3132 and 445) are in the year 2008/09 and 2003/04, where the highest and lowest MPS of SBI (Rs. 1511 and 255) are in the year 2008/09 and 2003/04 respectively. The MPS trends of all firms are fluctuated.

The coefficient of variation (CV) of MPS of HBL and EBL are lesser than NBBL, NABIL, BOKL and SBI among sample banks. The higher CV indicates the greater variability of MPS. Thus the analysis of MPS trend shows that the HBL, EBL and NABIL capital increasing rate are higher than that of than NBBL, BOKL and SBI among sample banks.

Figure 4.4: MPS of BOKL, NBBL, NABIL HBL, EBL and SBI
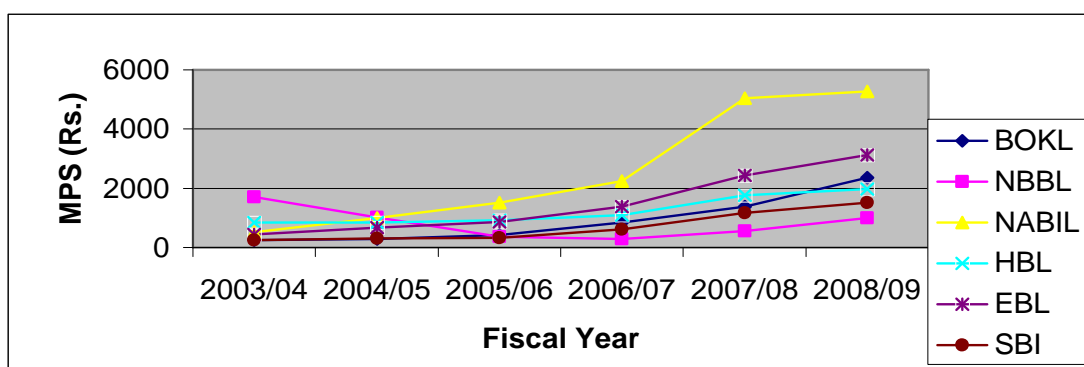
4.2   Simple Regression Analysis

This part is concerned with the analysis of relationship between Market Price of Stock (MPS) & Dividend per Share (DPS), Market Price of Stock (MPS) & Earning per Share (EPS) and Cash Dividend Per share (DPS) & Earning per Share (EPS) of the sample firms. The following table shows the simple regression results of BOKL, NBBL, NABIL, HBL, EBL and SBI with the relationship between MPS, DPS and EPS.

Table 4.5
Simple Regression Analysis

Equation	Model	a	b	S.E$_b$	t	R^2	R
1	$Y_1 = a+bx_1$	1436	5.100	4.243	1.202	0.325	0.570
2	$Y_2 = a+bx_2$	3562.870	-12.005	12.361	-0.971	0.239	-0.489
3	$Y_3 = a+bx_3$	200.522	-0.805	1.514	-0.532	0.086	0.293
4	$Y_4 = a+bx_4$	773.868	6.396	7.20	0.888	0.208	0.456
5	$Y_5 = a+bx_5$	428.768	10.551	8.863	1.19	0.321	0.566
6	$Y_6 = a+bx_6$	19.34	-0.03	0.767	-0.04	0.001	0.023
7	$Y_7 = a+bx_7$	419.508	16.475	8.576	1.921	0.552	0.743
8	$Y_8 = a+bx_8$	-209.829	16.271	12.374	1.315	0.366	0.605
9	$Y_9 = a+bx_9$	-8.829	0.621	0.601	1.033	0.262	0.512
10	$Y_{10}=a+bx_{10}$	817.167	12.518	8.907	1.405	0.397	0.630
11	$Y_{11}=a+bx_{11}$	54.452	16.555	5.279	3.136	0.766	0.875
12	$Y_{12}=a+bx_{12}$	-33.836	0.858	0.239	3.594	0.812	0.901
13	$Y_{13}= a+bx_{13}$	437.5	16.458	3.592	4.582	0.875	0.935
14	$Y_{14}= a+bx_{14}$	-112.761	21.652	11.8	1.835	0.529	0.727
15	$Y_{15}= a+bx_{15}$	-13.804	0.747	0.877	0.852	0.195	0.442
16	$Y_{16}=a+bx_{16}$	253.583	54.646	14.701	3.717	0.822	0.906
17	$Y_{17}=a+bx_{17}$	-130.960	38.878	2.506	15.517	0.998	0.994
18	$Y_{18}=a+bx_{18}$	-4.850	0.588	0.158	3.722	0.822	0.907

Source: Calculated from SPSS Computer Software (Appendix A).

The dependent variable Y_1 and Y_2 represent the MPS of BOKL and Y_3 represents DPS of it. Y_4 and Y_5 represent the MPS of NBBL and Y_6 represent DPS of it. Y_7 and Y_8 represent the MPS of NABIL and Y_9 represent the DPS of it. Y_{10} and Y_{11} represent the MPS of HBL and Y_{12} represents the DPS of it. Y_{13} and Y_{14} represent the MPS of EBL and Y_{15} represents the DPS of it. Y_{16} and Y_{17} represent the MPS of SBI and Y_{18} represents the DPS of it.

4.2.1 Regression Results of MPS on DPS of BOKL

The equation 1 of the table 4.5 shows the relationship between MPS and DPS of BOKL. As the results show the slope of coefficient (b) is 5.100, which indicates that if the DPS of BOKL is increased by 1 per share, its MPS on an average goes up by Rs. 5.100 per Share. The intercept coefficient is 1436, which shows that the average MPS would be Rs. 1436 per share if the DPS were zero. The coefficient of determination (R^2) is 0.325, which indicates that only 32.5 percent of variation of MPS is determined by the explanatory variable DPS.

Although, the simple correlation coefficient (R) between MPS and DPS of BOKL is 0.570, the estimated slope of coefficient is not statistically significant at 5% level of significance as tabulated value ($t_{0.05}$) for 3d.f for two-tailed (3.182) more than calculated t value (1.202). It explains that there is (are) other variable(s) except than DPS, which could affect the overall MPS of the firm.

4.2.2 Simple Regression Results of MPS on EPS of BOKL

The equation 2 of the table 4.5 shows the relationship between EPS and MPS of BOKL. As these results show the slope of coefficient is –12.005, which indicates that negative correlation exist between MPS and EPS of the BOKL i.e. 1 rupee increase in EPS leads to an average of about Rs.12.005 decrease in MPS or stock price in case of BOKL. The decrease in MPS due to increase in EPS sounds very awkward part and ridiculous which means that MPS of BOKL does not depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.239, which indicates that only 23.90% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is –0.971, which is less than tabulated value, the estimated slope of coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient R between

MPS and EPS of BOKL is –0.489, which indicates that the relationship between MPS and EPS is negatively correlated. Therefore the firm should try to plan for profitable opportunities.

4.2.3 Simple Regression of DPS on EPS of BOKL

The equation 3 of the table 4.5 shows the relationship between EPS and DPS of BOKL. As the results show the slope of coefficient is –0.805, which indicates that if the EPS of BOKL is increased by 1 per share, it's DPS on an average goes fall by Rs.0.805 per share. The intercept coefficient is 200.522, which shows that the average DPS would be Rs.200.522, if the EPS were zero. The coefficient of determination R^2 is 0.086, which indicates that; only 8.6% of the variation of DPS is determined by the explanatory variable EPS.

The simple correlation coefficient r between DPS and EPS of BOKL is 0.293, which indicates that the relationship between DPS and EPS is positively correlated. Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was -0.532, which is less than tabulated t, the estimated slope coefficient is not statistically significant at 5% level of significance. The insignificance of DPS & EPS although in positive correlation explains there is not any reasonable dividend policy in BOKL.

4.2.4 Regression Results of MPS on DPS of NBBL

The equation number 4 of the table 4.5 shows the relationship between MPS and DPS of NBBL. As the results show the slope of coefficient (b) is 6.396, which indicates that if the DPS of NBBL is increased by 1 per share it's MPS on an average also increased by Rs.6.396 per share. The intercept coefficient is 773.868, which shows that the average MPS would be Rs. 773.868 per share if the DPS were zero. The coefficient of determination (R^2) is 0.208, which indicates that only 20.8 percent of the variation of MPS is determined by the explanatory variable DPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3. 182. Since the calculated t value is 0.888, which is less than the tabulated value of t, the estimated slope of coefficient is not statistically significant at 5 % level of significance. The simple correlation coefficient (r) between MPS and DPS of NBBL is 0.456, which indicates that the relationship between MPS and DPS is positively correlated.

4.2.5   Simple Regression Results of MPS on EPS of NBBL

The equation 5 of the table 4.5 shows the relationship between EPS and MPS of NBBL. As these results show the slope of coefficient is 10.551, which indicates that positive correlation exist between MPS and EPS of the NBBL i.e. 1 rupee increase in EPS leads to an average of about Rs.10.551 increase in MPS or stock price in case of NBBL. The increase in MPS due to increase in EPS sounds very good part which means that MPS of NBBL does depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.321. This indicates that only 32.10% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is 1.19, which is less than tabulated value, the estimated slope of coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient r between MPS and EPS of NBBL is 0.566, which indicates that the relationship between MPS and EPS is positively correlated.

4.2.6   Simple Regression of DPS on EPS of NBBL

The equation 6 of the table 4.5 shows the relationship between EPS and DPS of NBBL. As the results show the slope of coefficient is -0.03, which indicates that if the EPS of NBBL is increased by 1 per share, its DPS on an average goes down by Rs.-0.03 per share. The intercept coefficient is 19.34, which shows that the average DPS would be Rs.19.34, if the EPS were zero. The coefficient of determination R^2 is 0.0.001, which indicates that; only 1.0% of the variation of DPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was -0.04, which is less than tabulated t, the estimated slope coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient (r) between DPS and EPS of NBBL is 0.023, which indicates that the relationship between DPS and BPS is less positively correlated.

4.2.7   Regression Results of MPS on DPS of NABIL

The equation 7 of the table 4.5 shows the relationship between MPS and DPS of NABIL. As the results show the slope of coefficient (b) is 16.475, which indicates that if the DPS of NABIL is increased by 1 per share, its MPS on an average goes up

by Rs. 16.475 per share. The intercept coefficient is 419.508, which shows that the average MPS would be Rs. 419.508 per share if the DPS were zero. The coefficient of determination (R^2) is 0.552, which indicates that only 55.20 percent of variation of MPS is determined by the explanatory variable DPS.

Although, the simple correlation coefficient (R) between MPS and DPS of NABIL is 0.743, the estimated slope of coefficient is not statistically significant at 5% level of significance as tabulated value ($t_{0.05}$) for 3d.f for two-tailed (3.182) more than calculated t value (1.921). It explains that there is (are) other variable(s) except than DPS, which could affect the overall MPS of the firm.

4.2.8 Simple Regression Results of MPS on EPS of NABIL

The equation 8 of the table 4.5 shows the relationship between EPS and MPS of NABIL. As these results show the slope of coefficient is 16.271, which indicates that positive correlation exist between MPS and EPS of the NABIL i.e. 1 rupee increase in EPS leads to an average of about Rs.16.271 increase in MPS or stock price in case of NABIL. The increase in MPS due to increase in EPS sounds very good part which means that MPS of NABIL do depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.366, which indicates that only 36.60% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is 1.315, which is less than tabulated value, the estimated slope of coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient R between MPS and EPS of NABIL is 0.605, which indicates that the relationship between MPS and EPS is positively correlated. Therefore the firm should try to plan for profitable opportunities.

4.2.9 Simple Regression of DPS on EPS of NABIL

The equation 9 of the table 4.5 shows the relationship between EPS and DPS of NABIL. As the results show the slope of coefficient is 0.621, which indicates that if the EPS of NABIL is increased by 1 per share, it's DPS on an average goes up by Rs.0.621 per share. The intercept coefficient is -8.829, which shows that the average DPS would be Rs.8.829, if the EPS were zero. The coefficient of determination R^2 is

0.262, which indicates that; only 26.20% of the variation of DPS is determined by the explanatory variable EPS.

The simple correlation coefficient r between DPS and EPS of NABIL is 0.512, which indicates that the relationship between DPS and EPS is positively correlated. Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was 1.033, which is less than tabulated t, the estimated slope coefficient is not statistically significant at 5% level of significance. The insignificance of DPS & EPS although in positive correlation explains, there is not any reasonable dividend policy in NABIL.

4.2.10 Regression Results of MPS on DPS of HBL

The equation 10 of the table 4.5 shows the relationship between MPS and DPS of HBL. As the results show the slope of coefficient (b) is 12.518, which indicates that if the DPS of HBL is increased by 1 per share it's MPS on an average also increased by Rs.12.518 per share. The intercept coefficient is 817.167, which shows that the average MPS would be Rs. 817.167 per share if the DPS were zero. The coefficient of determination (R^2) is 0.397, which indicates that only 39.7 percent of the variation of MPS is determined by the explanatory variable DPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3. 182. Since the calculated t value is 1.405, which is less than the tabulated value of t, the estimated slope of coefficient is not statistically significant at 5 % level of significance. The simple correlation coefficient (r) between MPS and DPS of HBL is 0.630, which indicates that the relationship between MPS and DPS is positively correlated.

4.2.11 Simple Regression Results of MPS on EPS of HBL

The equation 11 of table 4.5 shows the relationship between EPS and MPS of HBL. As these results show the slope of coefficient is 16.555, which indicates that positive correlation exist between MPS and EPS of the HBL i.e. 1 rupee increase in EPS leads to an average of about Rs.16.555 increase in MPS or stock price in case of HBL. The increase in MPS due to increase in EPS sounds very good part which means that MPS of HBL does depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.766. This indicates that only 76.6% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is 3.136, which is less than tabulated value, the estimated slope of coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient r between MPS and EPS of HBL is 0.875, which indicates that the relationship between MPS and EPS is positively correlated.

4.2.12 Simple Regression of DPS on EPS of HBL

The equation 12 of table 4.5 shows the relationship between EPS and DPS of HBL. As the results show the slope of coefficient is 0.858, which indicates that if the EPS of HBL is increased by 1 per share, its DPS on an average goes up by Rs.0.858 per share. The intercept coefficient is -33.836, which shows that the average DPS would be Rs.-33.836, if the EPS were zero. The coefficient of determination R^2 is 0.812, which indicates that; only 81.20% of the variation of DPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was 3.594, which is greater than tabulated t, the estimated slope coefficient is statistically significant at 5% level of significance. The simple correlation coefficient (r) between DPS and EPS of HBL is 0.901, which indicates that the relationship between DPS and BPS is positively correlated.

4.2.13 Regression Results of MPS on DPS of EBL

The equation 13 of the table 4.5 shows the relationship between MPS and DPS of EBL. As the results show the slope of coefficient (b) is 16.458, which indicates that if the DPS of EBL is increased by 1 per share, its MPS on an average goes up by Rs. 16.458 per share. The intercept coefficient is 437.5, which shows that the average MPS would be Rs. 437.5 per share if the DPS were zero. The coefficient of determination (R^2) is 0.875, which indicates that 87.50 percent of variation of MPS is determined by the explanatory variable DPS.

Although, the simple correlation coefficient (R) between MPS and DPS of EBL is 0.935, the estimated slope of coefficient is statistically significant at 5% level of significance as tabulated value ($t_{0.05}$) for 3d.f for two-tailed (3.182) less than calculated t value (4.582). It explains that there is (are) other variable(s) except than DPS, which could affect the overall MPS of the firm.

4.2.14 Simple Regression Results of MPS on EPS of EBL

The equation 14 of table 4.5 shows the relationship between EPS and MPS of EBL. As these results show the slope of coefficient is 21.652, which indicates that positive correlation exist between MPS and EPS of the EBL i.e. 1 rupee increase in EPS leads to an average of about Rs.21.652 increase in MPS or stock price in case of EBL. The increase in MPS due to increase in EPS sounds very good part which means that MPS of EBL do depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.529, which indicates that only 52.90% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is 1.835, which is less than tabulated value, the estimated slope of coefficient is not statistically significant at 5% level of significance. The simple correlation coefficient R between MPS and EPS of EBL is 0.727, which indicates that the relationship between MPS and EPS is positively correlated. Therefore the firm should try to plan for profitable opportunities.

4.2.15 Simple Regression of DPS on EPS of EBL

The equation 15 of table 4.5 shows the relationship between EPS and DPS of EBL. As the results show the slope of coefficient is 0.747, which indicates that if the EPS of EBL is increased by 1 per share, it's DPS on an average goes up by Rs.0.747 per share. The intercept coefficient is -13.804, which shows that the average DPS would be Rs.13.804, if the EPS were zero. The coefficient of determination R^2 is 0.195, which indicates that; only 19.5% of the variation of DPS is determined by the explanatory variable EPS.

The simple correlation coefficient r between DPS and EPS of EBL is 0.442, which indicates that the relationship between DPS and EPS is positively correlated. Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was 0.852, which is less than tabulated t, the estimated slope coefficient is not statistically significant at 5% level of significance. The insignificance of DPS & EPS although in positive correlation explains, there is not any reasonable dividend policy in EBL.

4.2.16 Regression Results of MPS on DPS of SBI

The equation 16 of the table 4.5 shows the relationship between MPS and DPS of SBI. As the results show the slope of coefficient (b) is 54.646, which indicates that if the DPS of SBI is increased by 1 per share it's MPS on an average also increased by Rs.54.646 per share. The intercept coefficient is 253.583, which shows that the average MPS would be Rs. 253.583 per share if the DPS were zero. The coefficient of determination (R^2) is 0.822, which indicates that only 82.20 percent of the variation of MPS is determined by the explanatory variable DPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value is 3.717, which is greater than the tabulated value of t, the estimated slope of coefficient is statistically significant at 5 % level of significance. The simple correlation coefficient (r) between MPS and DPS of SBI is 0.906, which indicates that the relationship between MPS and DPS is positively correlated.

4.2.17 Simple Regression Results of MPS on EPS of SBI

The equation 17 of table 4.5 shows the relationship between EPS and MPS of SBI. As these results show the slope of coefficient is 38.878, which indicates that positive correlation exist between MPS and EPS of the SBI i.e. 1 rupee increase in EPS leads to an average of about Rs.38.878 increase in MPS or stock price in case of SBI. The increase in MPS due to increase in EPS sounds very good part which means that MPS of SBI does depends on EPS but stock prices have a random walk. The coefficient of determination R^2 is 0.998. This indicates that 99.8% of the variation of MPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) of 3 d f is 3.182. Since the calculated t value is 15.517, which is greater than tabulated value, the estimated slope of coefficient is statistically significant at 5% level of significance. The simple correlation coefficient r between MPS and EPS of SBI is 0.994, which indicates that the relationship between MPS and EPS is positively correlated.

4.2.18 Simple Regression of DPS on EPS of SBI

The equation 18 of the table 4.5 shows the relationship between EPS and DPS of SBI. As the results show the slope of coefficient is 0.588, which indicates that if the EPS of SBI is increased by 1 per share, its DPS on an average goes up by Rs.0.588 per share. The intercept coefficient is -4.850, which shows that the average DPS would be Rs.-4.850, if the EPS were zero. The coefficient of determination R^2 is 0.822, which

indicates that; only 82.20% of the variation of DPS is determined by the explanatory variable EPS.

Tabulated value ($t_{0.05}$) for 3 d f two tailed is 3.182. Since the calculated t value was 3.722, which is greater than tabulated t, the estimated slope coefficient is statistically significant at 5% level of significance. The simple correlation coefficient (r) between DPS and EPS of SBI is 0.907, which indicates that the relationship between DPS and EPS is positively correlated.

4.3 Multiple Regression Analysis

This part of the study is designed to examine the relationship between MPS, DPS and EPS & Lagged DPS. For this purpose two models have been determined. First one is the model for DPS and the next one is for MPS.

4.3.1 DPS$_t$ on EPS$_t$ & DPS $_{(t-1)}$

When the multiple regression model having two independent variables are run, the results are obtained as presented in table 4.6. It presents the usual linear relationship between average DPS, EPS & LDPS (Lagged Dividend per Share).

Table 4.6
Multiple Regression Analysis of DPS on EPS and Lagg DPS $_{(t-1)}$
(Regression Equation: $D_t = a + b_1 E_t + b_2 D_{t-1}$)

Firms	a	b_1	b_2	R^2	S.E	F	Sig.F
BOKL	222.289 (0.809) [0.503]	-0.865 (-0.467) [0.686]	-0.151 (-0.224) [0.843]	0.108	51.1960	0.122	0.892
NBBL	18.463 (0.567) [0.628]	0.282 (0.359) [0.754]	-0. 672 (-1.126) [0.377]	0.388	12.7339	0.634	0.612
NABIL	-11.306 (-0.174) [0.878]	0.707 (0.617) [0.600]	-0.112 (-0.907) [0.931]	0.516	21.1618	0.0.362	0.734
HBL	-35.855 (-2.080) [0.173]	0.953 (2.72) [0.113]	-0.135 (-0.448) [0.698]	0.829	8.1629	4.838	0.171
EBL	-22.272 (-0.629) [0.594]	1.099 (1.027) [0.412]	-0.460 (-0.738) [0.543]	0.363	12.3605	0.571	0.637
SBI	-3.978 (-1.103) [0.385]	0.661 (3.670) [0.067]	-0.252 (-0.925) [0.453]	0.875	4.3765	7.019	0.125

Source: Calculated from SPSS Computer Software (Appendix B).
Note: Dividend per Share, Earning pet Share and Lagged Dividend per Share are represented by D_t, E_t & $D_{(t-1)}$ respectively. Similarly, R^2 designates coefficient of multiple determination. Value ( ) & [] represents t-value and t-significance. * Represents the significance at 5% level of significance.

The results presented in table 4.6 clearly show, in BOKL one rupee increase in EPS leads to an average of about rupee 0.865 decreases in DPS, holding the lagged DPS variable constant. In the same way increase in one rupee of EPS leads to an average of about rupee 0.282, 0.707, 0.953, 1.099, and 0.661 increases in DPS of NBBL, NABIL, HBL, EBL and SBI respectively.

The value of multiple coefficient of determination (R^2) is very small (0.108) in BOKL while it goes up to 0.388, 0.516, 0.829, 0.363 and 0.875 in NBBL, NABIL, HBL, EBL and SBI. The t value of coefficient of EPS is not statistically significant in all the sample firms at 5% level of significance; therefore the regression equation could not provide statistically significant explanation of variation in the DPS of BOKL, NBBL, NABIL, HBL, EBL and SBI.

On the other hand, one rupee increase in lagged dividend per share resulted in only rupee -0.672 decreases in DPS, holding EPS variable as constant in NBBL. The same is noticed to be rupee –0.151, -0.112 -0.135, -0.460 &-0.252 decreases in BOKL, NABIL, HBL, EBL and SBI respectively. The t value of lagged dividend per share is also statistically insignificant at 5% level of significant in BOKL, NBBL, NABIL, HBL, SBI and EBL.

One of the most important points to be noted here is that the F-statistic for the regression is significant at 5% level of significance indicating that the regression equation provides a statistically significant explanation of the variation in DPS of HBL and SBI, while F-statistic is not significant at 5% level of significance in BOKL, NBBL, NABIL & EBL respectively.

As regards to regression model $D_1=a+b_1E_t+b_2D_{(t-1)}$ and the above explanation, the inferences are drawn that coefficient of EPS are very highly compared to the coefficient of lagged DPS in all the sample banks. This indicated that there is a positive relationship between EPS and DPS. Therefore, EPS have a predominant influence on DPS in all the sample banks. Therefore, the result of present study is more or less similar to the result of earlier study. But this study submits the lagged dividend as an independent variable in the DPS model as different to earlier study.

4.3.2 MPS_t on DPS_t & EPS_t

The next concerning of this stud is to know the relationship between MPS, DPS and EPS. Therefore, MPS being dependent and EPS & DPS being independent the following results are obtained:

Table 4.7
Multiple Regression Analysis of MPS on DPS and EPS
(Regression Equation: $P_t = a + b_1D_t + b_2E_t$)

Firms	a	b_1	b_2	R^2	S.E	F	Sig.F
BOKL	2775.529 (1.311) [0.320]	-8.644 (-0.635) [0.590]	4.176 (0.842) [0.488]	0.438	363.4999	0.781	0.562
NBBL	301.445 (0.725) [0.544]	6.583 (0.981) [0.430]	10.754 (1.205) [0.351]	0.541	154.5250	1.18	0.459
NABIL	-94.800 (-0.099) [0.930]	13.021 (1.156) [0.967]	8.180 (0.599) [0.610]	0.620	337.8387	1.630	0.380
HBL	-510.819 (-1.189) [0.356]	30.882 (3.163) [0.087]	-10.706 (-1.629) [0.245]	0.90	124.1863	8.955	0.100
EBL	72.58 (1.938) [0.192]	13.427 (19.693) [0.003]	11.620 (10.072) [0.010]	0.998	13.4022	412.652	0.02
SBI	-122.25 (-1.439) [0.287]	1.822 (1.164) [0.885]	37.807 (5.233) [0.035]	0.988	82.3398	81.343	0.12

Source: Calculated from SPSS Computer Software (Appendix B).
Note: Market Price per Share, Dividend per Share, and Earning per Share are represented by P_t, D_t & E_t respectively. Similarly, R^2 designates coefficient of multiple determination. Value ( ) & [] represents t-value and t-significance.

The results presented in table 4.7 indicate that there is greater influence of DPS rather than EPS to Market Price of Stock in all the sample banks. In BOKL one rupee increase in DPS leads to an average of about 8.644 rupees decrease in MPS holding the independent variable EPS constant. The same is noticed to be rupees 6.583, 13.021, 30.882, 13.427 and 1.822 increase of NBBL, NABIL, HBL, EBL and SBI respectively.

The value of multiple coefficient of determination (R^2) is very small (0.438) in BOKL while it goes up to 0.90, 0.998, 0.541, 0.620 & 0.998 in HBL, EBL, NBBL, NABIL and SBI respectively; The t value of coefficient of DPS & EPS is not statistically significant in all the sample banks at 5% level of significance, therefore the regression

equation could not provide statistically significant explanation of variation in the MPS of the mentioned banks.

The F- statistic for regression are 0.781, 8.955, 1.18, 412.552, 1.630 & 81.343 for BOKL, HBL, NBBL, EBL, NABIL and SBI respectively, which are lower than their corresponding critical value at 5% level of significance except HBL, SBI and EBL indicating that the regression equation do not provide statistically significant explanation of variation in the stock prices of BOKL, NABIL and NBBL but provide statistically significant explanation of variation in the stock prices of HBL, SBI and EBL.

The table 4.7 also shows the EPS relationship with MPS. According to the regression results, one rupee increase in EPS in NABIL leads to an average about 8.180 increases in MPS holding independent variable DPS as constant. The same is noticed to be 37.807 increases in SBI.

The table 4.7 also shows the EPS relationship with MPS. According to the regression results, one rupee increase in EPS in BOKL, NBBL, NABIL, SBI and EBL leads to an average about 4.176, 10754, 8.180, 37.807 and 11.620 increase in MPS holding independent variable DPS as constant respectively. The same is noticed to be –10.706 decreases in case of HBL.

4.4   Test of Hypothesis

This part of study is concerned with the relationship between EPS, DPS and MPS of sample banks. In other words, this part of study is concerned with the test of the relationship between mentioned factors of BOKL, NBBL and NABIL & HBL, EBL and SBI from the sample banks.

The Null Hypothesis has been formulated to test whether the difference between the mean value of EPS, DPS and MPS of BOKL, NBBL and NABIL and similarly HBL, EBL and SBI is statistically significant or not.

4.4.1 Mean Values of EPS of NABIL and SBI

H_0: There is no significant difference between mean value of EPS of NABIL and SBI.
H_1: There is significant difference between mean value of EPS of NABIL and SBI.
Symbolically:

Null Hypothesis (H$_0$): $\mu_1 = \mu_2$
Alternative Hypothesis (H$_1$): $\mu_1 \neq \mu_2$

The following figure derived from Appendix- (III) shows the mean value of EPS and calculated "t" value as following:

Calculated t value = 6.66
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of EPS of NABIL = 81.58
Mean value of EPS of SBI = 18.22

The above-mentioned information shows that the calculated 't' value at 10 d f is 6.66, which is greater than tabulated value of "t" at 10 d f is 1.812. It is statistically significant.

Hence H$_1$ is accepted and therefore, the statistical evidence shows that there is significant difference between mean value of EPS of NABIL and SBI, or there is significant relationship between mean value of EPS of NABIL and SBI.

4.4.2 Mean Value of DPS of NABIL and SBI

H$_0$: There is no significant difference between mean value of DPS of NABIL and SBI.
H$_1$: There is significant difference between mean value of DPS of NABIL and SBI.
Symbolically:
Null Hypothesis (H$_0$): $\mu_1 = \mu_2$
Alternative Hypothesis (H$_1$): $\mu_1 \neq \mu_2$

The following figure derived from Appendix- (III) shows the mean value of DPS and Calculated "t" value as following:

Calculated t value =7.91
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of DPS of NABIL =78.33

Mean value of DPS of SBI = 5.5

The above-mentioned information shows that the calculated 't" value at 10 d.f is 7.91, which is greater than tabulated value of "t" at 10.d f is 1.812. It is statistically significant.

Hence, H_1 is accepted and therefore, the statistical evidence shows that there is significant difference between mean value of DPS of NABIL and SBI or there is significant relationship between mean value of DPS of NABIL and SBI.

4.4.3 Mean Value of MPS of NABIL and SBI

H_0: There is no significant difference between mean value of MPS of NABIL and SBI.

H_1: There is significant difference between mean value of MPS of NABIL and SBI.

Symbolically:

Null Hypothesis (H_0): $\sim_1 = \sim_2$
Alternative Hypothesis (H_1): $\sim_1 \acute{0} \sim_2$

The following figure derived from Appendix- (III) shows the mean value of MPS and Calculated "t" value as following:

Calculated t value = 1.99
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of MPS of NABIL =2596.66
Mean value of MPS of SBI = 699.33

The above-mentioned information shows that the calculated "t" value at 10 d f is 1.99, which is greater than tabulated value of "t" at 10 d f is 1.812. It is statistically significant.

Hence H_0 is rejected and therefore, the statistical evidence shows that there is significant difference between mean value of MPS of NABIL and SBI or there is significant relationship between mean value of MPS of NABIL and SBI.

4.4.4 Mean Values of EPS of BOKL and HBL

H_0: There is no significant difference between mean value of EPS of BOKL and HBL.
H_1: There is significant difference between mean value of EPS of BOKL and HBL.
Symbolically:
Null Hypothesis (H_0): $\sim_1 = \sim_2$
Alternative Hypothesis (H_1): $\sim_1 \mathrm{\acute{0}} \sim_2$

The following figure derived from Appendix- C shows the mean value of EPS and calculated "t" value as following:

Calculated t value = 3.64
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of EPS of BOKL = 27.22
Mean value of EPS of HBL = 57.98

The above-mentioned information shows that the calculated 't' value at 10 d f is 3.64, which is greater than tabulated value of "t" at 10.d f is 1.812. It is statistically significant.

Hence H_1 is accepted and therefore, the statistical evidence shows that there is significant difference between mean value of EPS of BOKL and HBL, or there is significant relationship between mean value of EPS of BOKL and HBL.

4.4.5 Mean Value of DPS of BOKL and HBL

H_0: There is no significant difference between mean value of DPS of BOKL and HBL.
H_1: There is significant difference between mean value of DPS of BOKL and HBL.
Symbolically:
Null Hypothesis (H_0): $\sim_1 = \sim_2$
Alternative Hypothesis (H_1): $\sim_1 \mathrm{\acute{0}} \sim_2$

The following figure derived from Appendix- C shows the mean value of DPS and Calculated "t" value as following:

Calculated t value =0.50
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of DPS of BOKL =13
Mean value of BPS of HBL = 15.47

The above-mentioned information shows that the calculated 't" value at 10.d.f is 0.50, which is lesser than tabulated value of "t" at 10.d f is 1.812. It is not statistically significant.

Hence, H_0 is accepted and therefore, the statistical evidence shows that there is not significant difference between mean value of DPS of BOKL and HBL or there is not significant relationship between mean value of DPS of BOKL and HBL.

4.4.6 Mean Value of MPS of BOKL and HBL

H_0: There is no significant difference between mean value of MPS of BOKL and HBL.
H_1: There is significant difference between mean value of MPS of BOKL and HBL.
Symbolically:
Null Hypothesis (H_0): $\sim_1 = \sim_2$
Alternative Hypothesis (H_1): $\sim_1 \acute{0} \sim_2$

The following figure derived from Appendix- C shows the mean value of MPS and Calculated "t" value as following:

Calculated t value = 0.73
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of MPS of BOKL =925.66
Mean value of MPS of HBL = 1239.33

The above-mentioned information shows that the calculated "t" value at 10 d f is 0.73, which is lesser than tabulated value of "t" at 10 d f is 1.812. It is n statistically significant.

Hence H_0 is accepted and therefore, the statistical evidence shows that there is not significant difference between mean value of MPS of SCBNL and HBL or there is not significant relationship between mean value of MPS of SCBNL and HBL

4.4.7 Mean Values of EPS of NBBL and EBL

H_0: There is no significant difference between mean value of EPS of NBBL and EBL.
H_1: There is significant difference between mean value of EPS of NBBL and EBL.
Symbolically:

Null Hypothesis (H_0): $\sim_1 = \sim_2$

Alternative Hypothesis (H_1): $\sim_1 \mathring{0} \sim_2$

The following figure derived from Appendix- (III) shows the mean value of EPS and calculated "t" value as following:

Calculated t value = 5.66
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of EPS of NBBL = 7.25
Mean value of EPS of EBL = 34.71

The above-mentioned information shows that the calculated 't' value at 10 d f is 5.66, which is greater than tabulated value of "t" at 10.d f is 1.812. It is statistically significant.

Hence H_0 is rejected and therefore, the statistical evidence shows that there is significant difference between mean value of EPS of NBBL and EBL, or there is significant relationship between mean value of EPS of NBBL and EBL.

4.4.8 Mean Value of DPS of NBBL and EBL

H_0: There is no significant difference between mean value of DPS of NBBL and EBL.
H_1: There is significant difference between mean value of DPS of NBBL and EBL.
Symbolically:

Null Hypothesis (H_0): $\sim_1 = \sim_2$

Alternative Hypothesis (H$_1$): $\mu_1 \neq \mu_2$

The following figure derived from Appendix- (III) shows the mean value of DPS and Calculated "t" value as following:

Calculated t value =4.22
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of DPS of NBBL =0.83
Mean value of DPS of EBL = 17.5

The above-mentioned information shows that the calculated 't" value at 10.d.f is 4.22, which is greater than tabulated value of "t" at 10.d f is 1.812. It is statistically significant.

Hence, H$_1$ is accepted and therefore, the statistical evidence shows that there is significant difference between mean value of DPS of NBBL and EBL or there is significant relationship between mean value of DPS of NBBL and EBL

4.4.9 Mean Value of MPS of NBBL and EBL

H$_0$: There is no significance difference between mean value of MPS of NBBL and EBL.
H$_1$: There is significant difference between mean value of MPS of NBBL and EBL.
Symbolically:
Null Hypothesis (H$_0$): $\mu_1 = \mu_2$
Alternative Hypothesis (H$_1$): $\mu_1 \neq \mu_2$

The following figure derived from Appendix- (III) shows the mean value of MPS and Calculated "t" value as following:

Calculated t value = 1.25
Tabulated t $_{(0.05)}$ value = 1.812
d.f. = 10
Level of significance = 5%
Mean value of MPS of NBBL =820

Mean value of MPS of EBL = 1488.5

The above-mentioned information shows that the calculated "t" value at 10 d f is 1.25, which is less than tabulated value of "t" at 10 d f is 1.812. It is not statistically significant.

Hence H_1 is rejected and therefore, the statistical evidence shows that there is not significant difference between mean value of MPS of NBBL and EBL or there is not significant relationship between mean value of MPS of NBBL and EBL.

4.5 Major Findings of the Study

A.   Findings of Descriptive Analysis

ʃ   From the descriptive analysis it was found that there is not any consistency in dividend policy in the sample banks. It has indicated the need of dividend strategy as well as the need of proper analysis of the respective group of the banks.

ʃ   The MPS is affected by the financial position and the dividend paid by the firms, in this regards the MPS of the sample firms was seemed to be fluctuated. It denotes Nepalese investors are not treated fairly.

ʃ   Most of the Nepalese firm from the past 6 years have not profit planning and investment strategy, which has imbalanced the whole position of the banks. It means there is not consistency even in the earnings.

ʃ   Most of the D/P Ratio of the sample banks in 6 years was found more than the popular practice (i.e. 40%).

ʃ   The lack of financial knowledge and the market inefficiency has affected the market price of the share in all the firms. But it is theoretically argued.

B.   Findings of Coefficient Correlation (r) & Coefficient of Multiple Determination (R^2) Analysis

ʃ   The relationship between MPS and DPS of BOKL shows the coefficient of determination (R^2) is 0.325, which indicates that only 32.5 percent of the variation of MPS is determined by the explanatory variable DPS. The simple correlation coefficient (r) between MPS and DPS of BOKL is 0.570.

) The relationship between EPS and MPS of BOKL shows, the slope of coefficient is –12.005. Only 23.90% of the variation of MPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between MPS and EPS of BOKL is 0.489.

) The relationship between EPS and DPS of BOKL, as the results show the slope coefficient is –0.805. Only 8.6% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of BOKL is 0.293.

) The relationship between MPS and DPS of HBL as the results show the slope of coefficient (b) is 12.518. The coefficient of determination (R^2) is 0.397, which indicates that only 39.70 percent of the variation of MPS is determined by the explanatory variable DPS. The, simple correlation coefficient (r) between MPS and DPS of HBL is 0.630.

) The relationship between EPS and MPS of HBL, as these results show, the slope of coefficient is 16.55. The coefficient of determination R^2 is 0.766, which indicates-that only 76.60% of the variation of MPS is determined by the explanatory variable EPS. The simple correlation coefficient(r) between MPS and EPS of HBL is 0.875.

) The relationship between EPS and DPS of HBL, as the results show the slope of coefficient is 0.858. The coefficient of determination R^2 is 0.812 which indicates that: 81.20% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of HBL is 0.901.

) The relationship between MPS and DPS of NABIL, as the results show the slope coefficient is 16.475. The coefficient of determination (R^2) is 0.552, which indicates that only 55.20 percent of the variation of MPS is determined by the explanatory variable DPS. The simple correlation coefficient (r) between MPS and DPS of NABIL is 0.743.

) The relationship between EPS and MPS of NABIL shows the slope of coefficient is 16.271. Only 36.60% of the variation of MPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between MPS and EPS of NABIL is 0.605.

) The relationship between EPS and DPS of NABIL, as the results show the slope coefficient is 0.621. Only 26.20% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of NABIL is 0.512.

) The relationship between MPS and DPS of SBI as the results show the slope of coefficient (b) is 54.646. The coefficient of determination (R^2) is 0.822, which indicates that only 82.20 percent of the variation of MPS is determined by the explanatory variable DPS. The simple correlation coefficient (r) between MPS and DPS of SBI is 0.906.

) The relationship between EPS and MPS of SBI, as these results show, the slope of coefficient is 38.878. The coefficient of determination R^2 is 0.998, which indicates-that only 99.80% of the variation of MPS is determined by the explanatory variable EPS. The simple correlation coefficient(r) between MPS and EPS of SBI is 0.994.

) The relationship between EPS and DPS of SBI, as the results show the slope of coefficient is 0.588. The coefficient of determination R^2 is 0.822 which indicates that 82.20% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of SBI is 0.907.

) The relationship between MPS and DPS of NBBL, as the results show the slope coefficient is 6.396. The coefficient of determination (R^2) is 0.208, which indicates that only 20.8 percent of the variation of MPS is determined by the explanatory variable DPS. The simple correlation coefficient (r) between MPS and DPS of NBBL is 0.456.

) The relationship between EPS and MPS of NBBL shows the slope of coefficient is 10.551. Only 32.10% of the variation of MPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between MPS and EPS of NBBL is 0.566.

) The relationship between EPS and DPS of NBBL, as the results show the slope coefficient is -0.03. Only 1.0% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of NBBL is 0.023.

) The relationship between MPS and DPS of EBL as the results show the slope of coefficient (b) is 16.458. The coefficient of determination (R^2) is 0.875, which indicates that only 87.5 percent of the variation of MPS is determined by the explanatory variable DPS. The simple correlation coefficient (r) between MPS and DPS of EBL is 0.935.

) The relationship between EPS and MPS of EBL, as these results show, the slope of coefficient is 21.652. The coefficient of determination R^2 is 0.529, which indicates-that only 52.90% of the variation of MPS is determined by the

explanatory variable EPS. The simple correlation coefficient(r) between MPS and EPS of EBL is 0.727.

) The relationship between EPS and DPS of EBL, as the results show the slope of coefficient is 0.747. The coefficient of determination R^2 is 0.195 which indicates that 19.5% of the variation of DPS is determined by the explanatory variable EPS. The simple correlation coefficient (r) between DPS and EPS of EBL is 0.442.

C. Findings of Financial Indicator Analysis

) EPS of BOKL, NBBL, NABIL, HBL, EBL and SBI are in fluctuating trend. The analysis of EPS trend shows that the profitability of BOKL, NBBL and NABIL common shareholders investment better than HBL, EBL and SBI respectively.

) The D/P ratio of BOKL, NBBL and NABIL are higher than that of HBL, EBL and SBI respectively.

) Dividend per share of all the sample banks is in fluctuating trend. The average dividend per share paid by BOKL, NBBL and NABIL are greater than HBL, EBL and SBI respectively in their respective groups.

) The MPS trends of all firms are fluctuated. The analysis of MPS trend shows that the BOKL, NBBL and NABIL capital increasing rate are higher than that of HBL, EBL and SBI respectively in their respective groups.

D. Findings of Multiple Regression Analysis

) There is greater influence of DPS rather than EPS to Market Price of Stock of all the sample banks were observed. The t value of coefficient of DPS & EPS is not statistically significant in all the sample banks. The F-statistic for regression are 0.781, 8.955, 0.362,7.019, 1.18 and 412.652 for BOKL, HBL, NABIL, SBI, NBBL and EBL respectively, indicating that the regression equation do not provide statistically significant explanation of variation in the stock prices incase of BOKL, NABIL and NBBL but provide statistically significant explanation of variation in the stock prices incase of HBL, SBI and EBL.

) The customary strong EPS and relatively week Lagged DPS effect on DPS in all the firms. The t value of coefficient of EPS is not statistically significant in all the sample banks. The t value of lagged dividend per share is also

statistically insignificant at 5% level of significance in all the firms. The F-statistic for the regression is significant at 5% level of significance indicating that the regression equation provides a statistically significant explanation of the variation in DPS of HBL and SBI, while F-statistic is not significant at 5% level of significance in BOKL, NBBL, NABIL and EBL respectively.

E.   Findings of Hypothesis Test

) There is not any significant re1ationship between mean value of EPS of NBBL and EBL.

) There is not any significant relationship between mean value of DPS of NBBL and EBL.

) The statistical evidence shows that there is not significant difference between mean value of MPS of NBBL and EBL.

) The statistical evidence shows that there is significant difference between mean value of EPS of BOKL and HBL.

) The statistical evidence shows that there is significant difference between mean value of DPS of BOKL and HBL.

) The statistical evidence shows that there is significant difference between mean value of MPS of BOKL and HBL.

) The statistical evidence shows that there is significant difference between mean value of EPS of NABIL and SBI.

) The statistical evidence shows that there is significant difference between mean value of DPS of NABIL and SBI.

) The statistical evidence shows that there is not significant difference between mean value of MPS of NABIL and SBI.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

A brief introduction of this study has been already presented in the first chapter. In the second chapter, the review of literature with possible review of ideas, theories and research findings have also been presented. Moreover, research methodology is described in third chapter relating to dividend decision. This chapter focuses on summarizing the study held with the researcher's conclusion. The next attempt in this chapter is made for the recommendations on the basis of findings. For this whole purpose the chapter is sub divided into summary, conclusion and recommendation as following:

5.1   Summary

From the above all analysis, the researcher found there is not any consistency in dividend policy in the sample banks. It indicates the need of dividend strategy as well as the need of proper analysis of the respective sector of the firms. Most of the Nepalese firm from the very past have not profit planning and investment strategy, which has imbalanced the whole position of the firms. It means there is not consistency even in the earnings.

The MPS is affected by the financial position and the dividend paid by the banks, in this regards the MPS of the sample banks is seem to be fluctuated. It denotes Nepalese investors are not treated fairly. The lack of financial knowledge and the market inefficiency has affected the market price of the share in all the banks. But it is theoretically argued. Every investor expects handsome earnings on the investment. A firm that is able to distribute fair dividend, will be able to raise further capital from capital market. The total earning that a shareholder can gain from share investment is classified into dividend yield and capital gain yield. The company therefore needs to device a proper balance between retention and dividend distributions.

In Nepal, only a few listed companies have paying regular dividends to their shareholders. Further companies have not been following stable dividend payout policy. On the other hand, the dividend payout ratio of listed companies in Nepal has not been able to distribute fair dividends. In this regards, however commercial banks are also no exception.

The objective of this study is to study the impact of dividend policy on market price of the stock, therefore it is concluded that more or less the dividend policy depends on the earning per share of a company; the earning per share and dividend per share having the positive relation may also impact on market price of stock. For this argument, there were two multiple regression formed.

The first multiple regression was formed to see the relationship of the lagged dividend per share and earning-per share to dividend per share. The results of different test reveal that there is positive relationship between DPS & EPS in most of the times. But for MPS it would not happen all the time that increase of EPS & DPS increases the MPS. The second multiple regression was formed to see the effect of EPS & DPS to MPS. But it also concludes the fact that some times the increase in DPS & EPS affects the MPS and some times it does not.

The insignificant of t-test in many cases, conveys the message of our capital market and financial managers of the companies are ignoring to those variables, which are used in the test. DPS and MPS simple regression have resulted positive relationship in all the banks. It is because the firms' rational and balancing decision in regards to dividend policy. The relation between DPS and EPS were observed as positive all the times in the sample banks, it could highlight the fact that "pay as much as the investor expects for their investment'.

5.2   Conclusion

From the study it can be concluded that there is not any consistency in the dividend policy of the sample banks, therefore some times the result of the different test accept the theoretical assumptions of dividend policy and some times do not.

The main focus of investors however is the dividend, but there is not any consistency and regular practice of dividend announcement in different firms.

In popular practice of Nepal, when the firm has big earnings they retain more and when they do not have good figure of earnings, they announce high dividend to protect their image in the capital market. Studying the dividend trend of Nabil Bank can be proved as this bank had paid Rs. 50 in the year 2003/04 when the EPS was Rs. 83.78 but in the year 2007/08 it had paid Rs. 100 as dividend, it is because the bank wanted to increase the perception value to protect the image in the capital market.

Similarly the dividend trend of Bank of Kathmandu can be proved as this bank had paid Rs. 5 in the year 2003/04 when the EPS was Rs. 27.222 but in the year 2007/08 and 2008/09 it had paid Rs. 20 as dividend, it is because the bank wanted to increase the perception value to protect the image in the capital market. In the same way many other examples can be found even these days.

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

5.3   Recommendations

Although, this study was concerned with dividend decision, it may be appropriate to provide a package of suggestion in the light of findings. However these recommendations may also have some repercussion, and there is no doubt of these measures to improve the existing conditions. On the basis of findings the following recommendation is made for the further applications of dividend policy to have the strong MPS in the capital market:

As banks are playing on the public money, the banks should plan profit by linking its activities with income generating programs whether fund based or non fund based. Formulation of dividend policy will clearly guide the way on how to follow dividend distribution. The policy should determine whether the company is going to adopt stable dividend policy, constant payout ratio or low regular plus extra dividends. What should be the long run dividend payout ratio, either it is pure residual policy, fixed dividend payout policy or smoothed residual dividend policy should have been clearly explained by the dividend policy. The tendency of doing as, management interference in policy matters about dividend decision should be eliminated.

Shareholders should be given a choice whether they prefer stock dividend or cash dividend. They should be well informed to shareholders that issue of stock dividend decrease market value per share and earning per share. As number of shares are increased, total earning to shareholders will be the same. Issue of cash dividend increases both market value per share and earning per share but it does not increase the number of shares.

The DPS analysis shows that there is not any consistency of dividend policy in all the sample banks. Therefore, these firms need to create somehow paying reasonable DPS

every year, it is because higher DPS creates positive attitude of shareholders towards company, which consequently helps to increase the market value of the shares. The psychological value of the shareholders is also valued as the assets of the firm.

EPS in BOKL, NBBL, HBL, EBL and SBI are in fluctuating trend; therefore these banks should search the fruitful investment opportunities plan for profit maximization. The correlation between MPS & DPS in BOKL observed from simple regression was 57.0% positive; therefore this firm should try to increase DPS to better uplift the MPS in future. The correlation between 'MPS & DPS in HBL is positive 63.0%; therefore HBL should try to search the investment opportunity and increasing DPS. The correlation between MPS & DPS in NABIL observed from simple regression was positive (0.743); therefore this bank should try to increase DPS to better uplift the MPS in future. The correlation between 'MPS & DPS in SBI is positive (0.906); therefore SBI should also try to search the investment opportunity and increasing DPS. Since higher CV of MPS indicates the greater variability of MPS, NABIL & SBI and BOKL & HBL should try to balance between dividend policy and MPS.

The correlation between MPS & DPS in EBL & NBBL are also very low positive value, it is because these banks have announced dividend in very fluctuating trend therefore other variable affected MPS more than DPS. These banks should maintain consistent dividend policy. There is greater influence DPS rather than EPS to market price of stock, was found by second multiple regression analysis for all the sample banks. Therefore to improve MPS the firms are suggested to increase the DPS while considering other MPS influencing variables. The multiple regressions of DPS result the fact that there is customary strong EPS and relatively weak lagged DPS effect on DPS decision. Therefore the bank is suggested to distribute as their income, not as their past trend of dividend distribution in BOKL, NABIL, & NBBL. The insignificance of t-statistics in all sample banks has clearly indicated DPS is the function of EPS & Lagg DPS. Therefore the banks should concentrate not only in EPS but also to the Lagg. DPS. It means at least dividend should be paid in the increasing trend. The F-statistics also significantly support this view in regards to HBL, EBL and SBI.

The test of hypothesis indicated that there is not any uniformity between the samples banks (in many eases) in regards to the financial indicators, therefore all the banks are suggested to analyze their sector to get into the decisions.

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APPENDIX- A

SIMPLE REGRESSION ANALYSIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.570	.325	.100	325.3675	.325	1.445	1	3	.316	1.570

a Predictors: (Constant), DPSBOKL
b Dependent Variable: MPSBOKL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152938.800	1	152938.800	1.445	.316
	Residual	317592.000	3	105864.000		
	Total	470530.800	4			

a Predictors: (Constant), DPSBOKL
b Dependent Variable: MPSBOKL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1436.000	400.745		3.583	.037
	DPSBOKL	5.100	4.243	.570	1.202	.316

a Dependent Variable: MPSBOKL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.456	.208	-.056	165.7677	.208	.789	1	3	.440

a Predictors: (Constant), DPSNBBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21683.208	1	21683.208	.789	.440
	Residual	82436.792	3	27478.931		
	Total	104120.000	4			

a Predictors: (Constant), DPSNBBL
b Dependent Variable: MPSNBBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	773.868	149.313		5.183	.014
	DPSNBBL	6.396	7.200	.456	.888	.440

a Dependent Variable: MPSNBBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.743	.552	.402	299.5520	.552	3.691	1	3	.150

a Predictors: (Constant), DPSNABIL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	331155.738	1	331155.738	3.691	.150
	Residual	269194.262	3	89731.421		
	Total	600350.000	4			

a Predictors: (Constant), DPSNABIL
b Dependent Variable: MPSNABIL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	419.508	376.277		1.115	.346
	DPSNABIL	16.475	8.576	.743	1.921	.150

a Dependent Variable: MPSNABIL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
	.630	.397	.196	248.4283	.397	1.975	1	3	.255	1.373

a Predictors: (Constant), DPSHBL
b Dependent Variable: MPSHBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	121902.990	1	121902.990	1.975	.255
	Residual	185149.810	3	61716.603		
	Total	307052.800	4			

a Predictors: (Constant), DPSHBL
b Dependent Variable: MPSHBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	817.167	181.682		4.498	.021
	DPSHBL	12.518	8.907	.630	1.405	.255

a Dependent Variable: MPSHBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.935	.875	.833	78.6960	.875	20.995	1	3	.020

a Predictors: (Constant), DPSEBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130020.833	1	130020.833	20.995	.020
	Residual	18579.167	3	6193.056		
	Total	148600.000	4			

a Predictors: (Constant), DPSEBL
b Dependent Variable: MPSEBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	437.500	55.646		7.862	.004
	DPSEBL	16.458	3.592	.935	4.582	.020

a Dependent Variable: MPSEBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.906	.822	.762	257.6746	.822	13.816	1	3	.034

a Predictors: (Constant), DPSSBI

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	917350.533	1	917350.533	13.816	.034
	Residual	199188.667	3	66396.222		
	Total	1116539.200	4			

a Predictors: (Constant), DPSSBI
b Dependent Variable: MPSSBI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	253.583	141.623		1.791	.171
	DPSSBI	54.646	14.701	.906	3.717	.034

a Dependent Variable: MPSSBI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.489	.239	-.014	345.4327	.239	.943	1	3	.403	1.003

a Predictors: (Constant), EPSBOKL
b Dependent Variable: MPSBOKL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	112559.521	1	112559.521	.943	.403
	Residual	357971.279	3	119323.760		
	Total	470530.800	4			

a Predictors: (Constant), EPSBOKL
b Dependent Variable: MPSBOKL

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3562.870	1734.649		2.054	.132
	EPSBOKL	-12.005	12.361	-.489	-.971	.403

a Dependent Variable: MPSBOKL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.566	.321	.094	153.5293	.321	1.417	1	3	.319

a Predictors: (Constant), EPSNBBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33406.230	1	33406.230	1.417	.319
	Residual	70713.770	3	23571.257		
	Total	104120.000	4			

a Predictors: (Constant), EPSNBBL
b Dependent Variable: MPSNBBL

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	428.768	392.643		1.092	.355
	EPSNBBL	10.551	8.863	.566	1.190	.319

a Dependent Variable: MPSNBBL

Model Summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
Model					R Square Change	F Change	df1	df2	Sig. F Change
1	.605	.366	.154	356.2951	.366	1.729	1	3	.280

a Predictors: (Constant), EPSNABIL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	219511.299	1	219511.299	1.729	.280
	Residual	380838.701	3	126946.234		
	Total	600350.000	4			

a Predictors: (Constant), EPSNABIL
b Dependent Variable: MPSNABIL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-209.829	1004.993		-.209	.848
	EPSNABIL	16.271	12.374	.605	1.315	.280

a Dependent Variable: MPSNABIL

Model Summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
Model					R Square Change	F Change	df1	df2	Sig. F Change	
1	.875	.766	.688	154.6697	.766	9.835	1	3	.052	2.251

a Predictors: (Constant), EPSHBL
b Dependent Variable: MPSHBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	235284.620	1	235284.620	9.835	.052
	Residual	71768.180	3	23922.727		
	Total	307052.800	4			

a Predictors: (Constant), EPSHBL
b Dependent Variable: MPSHBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	54.452	315.306		.173	.874
	EPSHBL	16.555	5.279	.875	3.136	.052

a Dependent Variable: MPSHBL

Model Summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
Model					R Square Change	F Change	df1	df2	Sig. F Change
1	.72	.529	.372	152.7752	.529	3.367	1	3	.164

	7									

a Predictors: (Constant), EPSEBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78579.204	1	78579.204	3.367	.164
	Residual	70020.796	3	23340.265		
	Total	148600.000	4			

a Predictors: (Constant), EPSEBL
b Dependent Variable: MPSEBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-112.761	413.220		-.273	.803
	EPSEBL	21.652	11.800	.727	1.835	.164

a Dependent Variable: MPSEBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.994	.988	.984	67.6786	.988	240.765	1	3	.001

a Predictors: (Constant), EPSSBI

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1102798.028	1	1102798.028	240.765	.001
	Residual	13741.172	3	4580.391		
	Total	1116539.200	4			

a Predictors: (Constant), EPSSBI
b Dependent Variable: MPSSBI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-130.960	53.821		-2.433	.093
	EPSSBI	38.878	2.506	.994	15.517	.001

a Dependent Variable: MPSSBI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df 1	df2	Sig. F Change	
1	.293	.086	-.219	42.3238	.086	.283	1	3	.632	1.579

a Predictors: (Constant), EPSBOKL
b Dependent Variable: DPSBOKL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	506.098	1	506.098	.283	.632
	Residual	5373.902	3	1791.301		
	Total	5880.000	4			

a Predictors: (Constant), EPSBOKL
b Dependent Variable: DPSBOKL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	200.522	212.536		.943	.415
	EPSBOKL	-.805	1.514	-.293	-.532	.632

a Dependent Variable: DPSBOKL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df 1	df2	Sig. F Change
1	.023	.001	-.333	13.2880	.001	.002	1	3	.971

a Predictors: (Constant), EPSNBBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.283	1	.283	.002	.971
	Residual	529.717	3	176.572		
	Total	530.000	4			

a Predictors: (Constant), EPSNBBL
b Dependent Variable: DPSNBBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.340	33.983		.569	.609
	EPSNBBL	-3.073E-02	.767	-.023	-.040	.971

a Dependent Variable: DPSNBBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.512	.262	.017	17.3193	.262	1.067	1	3	.378

a Predictors: (Constant), EPSNABIL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	320.127	1	320.127	1.067	.378
	Residual	899.873	3	299.958		
	Total	1220.000	4			

a Predictors: (Constant), EPSNABIL
b Dependent Variable: DPSNABIL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-8.829	48.852		-.181	.868
	EPSNABIL	.621	.601	.512	1.033	.378

a Dependent Variable: DPSNABIL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.901	.812	.749	6.9911	.812	12.918	1	3	.037	1.634

a Predictors: (Constant), EPSHBL
b Dependent Variable: DPSHBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	631.367	1	631.367	12.918	.037
	Residual	146.625	3	48.875		
	Total	777.992	4			

a Predictors: (Constant), EPSHBL
b Dependent Variable: DPSHBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-33.836	14.252		-2.374	.098
	EPSHBL	.858	.239	.901	3.594	.037

a Dependent Variable: DPSHBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.442	.195	-.073	11.3494	.195	.726	1	3	.457

a Predictors: (Constant), EPSEBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.575	1	93.575	.726	.457
	Residual	386.425	3	128.808		
	Total	480.000	4			

a Predictors: (Constant), EPSEBL
b Dependent Variable: DPSEBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-13.804	30.697		-.450	.683
	EPSEBL	.747	.877	.442	.852	.457

a Dependent Variable: DPSEBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.907	.822	.763	4.2694	.822	13.854	1	3	.034

a Predictors: (Constant), EPSSBI

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	252.517	1	252.517	13.854	.034
	Residual	54.683	3	18.228		
	Total	307.200	4			

a Predictors: (Constant), EPSSBI
b Dependent Variable: DPSSBI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.850	3.395		-1.428	.249
	EPSSBI	.588	.158	.907	3.722	.034

a Dependent Variable: DPSSBI

APPENDIX B

MULTIPLE REGRESSION ANALYSIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.329	.108	-.783	51.1960	.108	.122	2	2	.892	1.393

a Predictors: (Constant), LAGG DPSBOKL, EPSBOKL
b Dependent Variable: DPSBOKL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	637.934	2	318.967	.122	.892
	Residual	5242.066	2	2621.033		
	Total	5880.000	4			

a Predictors: (Constant), LAGG DPSBOKL, EPSBOKL
b Dependent Variable: DPSBOKL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	222.289	274.800		.809	.503
	EPSBOKL	-.865	1.852	-.315	-.467	.686
	LAGG DPSBOKL	-.151	.675	-.151	-.224	.843

a Dependent Variable: DPSBOKL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.623	.388	-.224	12.7339	.388	.634	2	2	.612

a Predictors: (Constant), LGDPSNBBL, EPSNBBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	205.698	2	102.849	.634	.612
	Residual	324.302	2	162.151		
	Total	530.000	4			

a Predictors: (Constant), LGDPSNBBL, EPSNBBL
b Dependent Variable: DPSNBBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.463	32.575		.567	.628
	EPSNBBL	.282	.786	.212	.359	.754
	LGDPSNBBL	-.672	.597	-.666	-1.126	.377

a Dependent Variable: DPSNBBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.516	.266	-.468	21.1618	.266	.362	2	2	.734

a Predictors: (Constant),LAGG DPSNABIL, EPSNABIL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	324.357	2	162.178	.362	.734
	Residual	895.643	2	447.822		
	Total	1220.000	4			

a Predictors: (Constant), LAGG DPSNABIL, EPSNABIL
b Dependent Variable: DPSNABIL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-11.306	64.904		-.174	.878
	EPSNABIL	.707	1.145	.583	.617	.600
	LAGGDPSNABIL	-.112	1.151	-.092	-.097	.931

a Dependent Variable: DPSNABIL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.910	.829	.657	8.1629	.829	4.838	2	2	.171	1.683

a Predictors: (Constant), LAGG DPSHBL, EPSHBL
b Dependent Variable: DPSHBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	644.725	2	322.362	4.838	.171
	Residual	133.267	2	66.634		
	Total	777.992	4			

a Predictors: (Constant), LAGG DPSHBL, EPSHBL
b Dependent Variable: DPSHBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	-35.855	17.241		-2.080	.173
	EPSHBL	.953	.350	1.001	2.720	.113
	LAGG DPSHBL	-.135	.301	-.165	-.448	.698

a Dependent Variable: DPSHBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.603	.363	-.273	12.3605	.363	.571	2	2	.637

a Predictors: (Constant), LGDPSEBL, EPSEBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	174.438	2	87.219	.571	.637
	Residual	305.562	2	152.781		
	Total	480.000	4			

a Predictors: (Constant), LGDPSEBL, EPSEBL
b Dependent Variable: DPSEBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-22.272	35.400		-.629	.594
	EPSEBL	1.099	1.070	.649	1.027	.412
	LGDPSEBL	-.460	.632	-.460	-.728	.543

a Dependent Variable: DPSEBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.936	.875	.751	4.3765	.875	7.019	2	2	.125

a Predictors: (Constant), LAGG DPSSBI, EPSSBI

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	268.893	2	134.446	7.019	.125
	Residual	38.307	2	19.154		
	Total	307.200	4			

a Predictors: (Constant), LAGG DPSSBI, EPSSBI
b Dependent Variable: DPSSBI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.978	3.606		-1.103	.385
	EPSSBI	.661	.180	1.019	3.670	.067
	LAGGDPSSBI	-.252	.272	-.257	-.925	.453

a Dependent Variable: DPSSBI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.662	.438	-.123	363.4999	.438	.781	2	2	.562	1.592

a Predictors: (Constant), DPSBOKL, EPSBOKL
b Dependent Variable: MPSBOKL

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	206266.445	2	103133.223	.781	.562
	Residual	264264.355	2	132132.177		
	Total	470530.800	4			

a Predictors: (Constant), DPSBOKL, EPSBOKL
b Dependent Variable: MPSBOKL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2725.529	2078.617		1.311	.320
	EPSBOKL	-8.644	13.606	-.352	-.635	.590
	DPSBOKL	4.176	4.959	.467	.842	.488

a Dependent Variable: MPSBOKL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.736	.541	.083	154.5250	.541	1.180	2	2	.459

a Predictors: (Constant), EPSNBBL, DPSNBBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56364.069	2	28182.035	1.180	.459
	Residual	47755.931	2	23877.965		
	Total	104120.000	4			

a Predictors: (Constant), EPSNBBL, DPSNBBL
b Dependent Variable: MPSNBBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	301.445	415.975		.725	.544
	DPSNBBL	6.583	6.714	.470	.981	.430
	EPSNBBL	10.754	8.923	.577	1.205	.351

a Dependent Variable: MPSNBBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.787	.620	.240	337.8387	.620	1.630	2	2	.380

a Predictors: (Constant), EPSNABIL, DPSNABIL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	372080.054	2	186040.027	1.630	.380
	Residual	228269.946	2	114134.973		
	Total	600350.000	4			

a Predictors: (Constant), EPSNABIL, DPSNABIL
b Dependent Variable: MPSNABIL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-94.860	958.108		-.099	.930
	DPSNABIL	13.021	11.262	.587	1.156	.367
	EPSNABIL	8.180	13.661	.304	.599	.610

a Dependent Variable: MPSNABIL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.948	.900	.799	124.1863	.900	8.955	2	2	.100	2.698

a Predictors: (Constant), DPSHBL, EPSHBL
b Dependent Variable: MPSHBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	276208.337	2	138104.169	8.955	.100
	Residual	30844.463	2	15422.231		
	Total	307052.800	4			

a Predictors: (Constant), DPSHBL, EPSHBL
b Dependent Variable: MPSHBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-510.819	429.544		-1.189	.356
	EPSHBL	30.882	9.763	1.633	3.163	.087
	DPSHBL	-16.706	10.256	-.841	-1.629	.245

a Dependent Variable: MPSHBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.999	.998	.995	13.4022	.998	412.652	2	2	.002

a Predictors: (Constant), EPSEBL, DPSEBL

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148240.761	2	74120.380	412.652	.002
	Residual	359.239	2	179.620		
	Total	148600.000	4			

a Predictors: (Constant), EPSEBL, DPSEBL
b Dependent Variable: MPSEBL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	72.580	37.452		1.938	.192
	DPSEBL	13.427	.682	.763	19.693	.003
	EPSEBL	11.620	1.154	.390	10.072	.010

a Dependent Variable: MPSEBL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.994	.988	.976	82.3398	.988	81.343	2	2	.012

a Predictors: (Constant), EPSSBI, DPSSBI

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1102979.522	2	551489.761	81.343	.012
	Residual	13559.678	2	6779.839		
	Total	1116539.200	4			

a Predictors: (Constant), EPSSBI, DPSSBI
b Dependent Variable: MPSSBI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-122.125	84.874		-1.439	.287
	DPSSBI	1.822	11.135	.030	.164	.885
	EPSSBI	37.807	7.225	.966	5.233	.035

a Dependent Variable: MPSSBI

APPENDIX C

HYPOTHESIS TEST

Hypothesis Test of EPS

Nepal Arab Bank Ltd. (NABIL)

$\overline{X}_1 = 81.58$

$s_1 = 13.31$

$n_1 = 6$

Nepal SBI Bank Ltd. (SBI)

$\overline{X}_2 = 18.22$

$s_2 = 12.13$

$n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{81.58 - 18.22}{\sqrt{194.46\left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{53.36}{8.01} = 6.66$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(13.31) + 6(12.12)}{6 + 6 - 2} = \frac{1944.65}{10} = 194.46$$

Calculated t value = 6.66

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812

Bank of Kathmandu (BOKL)

$\overline{X}_1 = 27.22$

$s_1 = 13.70$

$n_1 = 6$

Himalayan Bank Ltd. (HBL)

$\overline{X}_2 = 57.98$

$s_2 = 13.12$

$n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{27.22 - 57.98}{\sqrt{215.89\left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{30.76}{8.44} = 3.64$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(13.70) + 6(13.12)}{6 + 6 - 2} = \frac{2158.94}{10} = 215.89$$

Calculated t value = 3.64

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value =1.812

| Nepal Bangladesh Bank Ltd. (NBBL) | Everest Bank Ltd. (EBL) |

$\overline{X}_1 = 7.25$ $\overline{X}_2 = 34.71$

$s_1 = 9.25$ $s_2 = 5.80$

$n_1 = 6$ $n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{7.25 - 34.71}{\sqrt{71.52\left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{27.46}{4.85} = 5.66$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(9.25) + 6(5.80)}{6 + 6 - 2} = \frac{715.21}{10} = 71.52$$

Calculated t value = 5.66

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value =1.812

Hypothesis test of DPS

| Nepal Arab Bank Ltd. (NABIL) | Nepal SBI Bank Ltd. (SBI) |

$\overline{X}_1 = 78.33$ $\overline{X}_2 = 5.5$

$s_1 = 20.16$ $s_2 = 4.63$

$n_1 = 6$ $n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{78.33 - 5.5}{\sqrt{256.71\left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{72.83}{9.20} = 7.91$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(20.16) + 6(4.63)}{6 + 6 - 2} = \frac{2567.17}{10} = 256.71$$

Calculated t value = 7.91

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value =1.812

Bank of Kathmandu Ltd. (BOKL)

$\overline{X}_1 = 13$

$s_1 = 5.65$

$n_1 = 6$

Himalayan Bank Ltd. (HBL)

$\overline{X}_2 = 15.47$

$s_2 = 9.46$

$n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \quad = \frac{13 - 15.47}{\sqrt{72.84\left(\frac{1}{6} + \frac{1}{6}\right)}} \quad = \frac{2.47}{4.90} \quad = 0.50$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} \quad = \frac{6(5.65)^2 + 6(9.46)^2}{6 + 6 - 2} \quad = \frac{728.47}{10} \quad = 72.84$$

Calculated t value = 0.50

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812

Nepal Bangladesh Bank Ltd. (NBBL)

$\overline{X}_1 = 0.83$

$s_1 = 2.041$

$n_1 = 6$

Everest Bank Ltd. (EBL)

$\overline{X}_2 = 17.5$

$s_2 = 6.12$

$n_2 = 6$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \quad = \frac{0.83 - 17.5}{\sqrt{47.44\left(\frac{1}{6} + \frac{1}{6}\right)}} \quad = \frac{16.67}{4.90} \quad = 4.22$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} \quad = \frac{6(2.041)^2 + 6(6.12)^2}{6 + 6 - 2} \quad = \frac{474.43}{10} \quad = 47.44$$

Calculated t value = 4.22

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812

Hypothesis test of MPS

Nepal Arab Bank Ltd. (NABIL)

$\overline{X}_1 = 2596.66$

$s_1 = 2069.53$

$n_1 = 6$

$$T = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{2596.66 - 699.33}{\sqrt{2733781.2 \left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{1897.33}{949.81} = 1.99$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(2069.53)^2 + 6(524.92)^2}{6 + 6 - 2} = \frac{27337812.03}{10} = 2733781.2$$

Calculated t value = 1.99

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812

Nepal SBI Bank Ltd. (SBI)

$\overline{X}_2 = 699.33$

$s_2 = 524.92$

$n_2 = 6$

Bank of Kathmandu Ltd. (BOKL)

$\overline{X}_1 = 925.66$

$s_1 = 816.20$

$n_1 = 6$

$$T = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{925.66 - 1239.33}{\sqrt{551291.6 \left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{313.67}{426.52} = 0.73$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(816.20)^2 + 6(502.63)^2}{6 + 6 - 2} = \frac{5512916.14}{10} = 51291.6$$

Calculated t value = 0.73

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812

Himalayan Bank Ltd. (HBL)

$\overline{X}_2 = 1239.33$

$s_2 = 502.63$

$n_2 = 6$

Nepal Bangladesh Bank Ltd. (NBBL)   Everest Bank Ltd. (EBL)

$\overline{X}_1 = 820$ $\overline{X}_2 = 1488.5$

$s_1 = 531.44$ $s_2 = 1070.11$

$n_1 = 6$ $n_2 = 6$

$$T = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{820 - 1488.5}{\sqrt{856538.3\left(\frac{1}{6} + \frac{1}{6}\right)}} = \frac{668.5}{531.65} = 1.25$$

$$s^2 = \frac{n_1(s^2_1) + n_2(s^2_2)}{n_1 + n_2 - 2} = \frac{6(531.44)^2 + 6(1070.11)^2}{6 + 6 - 2} = \frac{8565383.31}{10} = 856538.3$$

Calculated t value = 1.25

d. f = $n_1 + n_2 - 2 = 10$

Tabulated t value = 1.812