CHAPTER – I

INTRODUCTION

1.1 Background of the Study

The behavior of dividend policy is the one of the very important issue of advance corporate finance and as well as for the Nepal's capital market. It is the most debatable issue in the advance corporate finance and still keeps its prominent place. Many researches has been conducted by the well-known researchers and provided the theories and empirical evidences regarding the determinants of dividend policy. But the issue is still unresolved. As many researchers try to cover the issue regarding the dividend behavior or dynamics and determinants of dividend policy, we still don't have an acceptable explanation for the observed dividend behavior of firms. We are yet to cover the complete factors that derive the dividend policy decision and the way these factors interact. One of the renowned dividend behaviors is the smoothing of firm's dividends vis-à-vis earnings and growth. In his seminal research, Lintner (1956) found that firms in the United States adjust their dividends smoothly to maintain a target long run payout ratio. The findings of Lintner regarding the dividend smoothing have also been confirmed by numerous studies since its publications. The smoothing of the dividend is the well-known empirical fact but the empirical evidence is based on United States market. The dividend policy of the companies varies from country to country due to various institutions and capital market differences. The Brealey and Myers (2005) list dividends as one of the top ten important unresolved issues in the field of advance corporate finance. The today's picture regarding the dividend is the same as the Black (1976) says that dividend are the primary puzzle in the economics of finance. Allen and Michaely (2003) conclude in his empirical work that much more empirical and theoretical researches on dynamics and determinants of dividend policy require before consensus can be reached. Above all, the justifications of this research are to continue haulage the dividend debate into the area of emerging market. In fact, many researchers have almost focused on the private sector in a few developed countries like United States of America,

Germany, United Kingdome and European Union. Now they have started to look at the dynamics and determinants dividend policies or behavior of dividend of companies operating in the developing countries and emerging markets. Therefore it is clear to say that incomplete picture of dividend policy is available especially in the case of Nepal's capital market. There is no doubt at all that in the capital market of Nepal dividend policy is totally different from the developed countries. The purpose of this study is to investigate dividend policy of financial firms in Nepal. The focus is to investigate how Nepalese banks set their dynamic dividend policies in a different institutional environment than that of developed markets like United States. Particularly this study empirically examined whether Nepalese firms follow stable dividend policies as in developed markets where dividend smoothing is stylized fact in long run. This study indicates the importance of institutional features towards the dynamic and determinants of dividend policy and also pointed out the advantages of examining the dividend policy in different institutional environments. The outcomes of the research will provide meaningful and handy information in the role of dividend in changing the market price of the firm.

1.2 Statement of the Problem

The Nepalese capital market and the economy have several important features for examining the dynamics and dividend policy. Firstly, Nepal moving towards the development and improving the economy position in the world. The economic growth and revolution has been identified by many researchers. From being a poverty suffering and economically backward country, the GDP growth show the much better shape than it was ever before. The capital markets of Nepal are much developed as before. Many studies conclude that firms are likely to pay stable dividend during the high growth period. So it will be important to find that how dynamic dividend policy is determined in growing economy like Nepal. Dividend, the most inspiring factor for the investment on shares of the corporation, is an important aspect of financial management because the dividend policy determines the division of earnings between payment to stockholders and reinvestment in the firm to exploit growth opportunities. It affects the value of firm as

well as overall financing decision such as financial structure, the flow of funds, corporate liquidity and investors' satisfaction.

The dividend policy, however, is still a crucial as well as controversial area of managerial finance. There is no consensus among the financial scholars on this subject matter and its relation with stock price. Some financial scholars say that stock prices are least influenced by dividend per share while some others believe that its relevance to the stock prices is quite significant. The idea of relevance is vague as well. It is rather hard to define whether dividend per share has positive effect or its effect is negative one.

Thus for the study, the following research problems have been raised;

a) How much dividend is paid by the banks for holding one unit of share?
b) What are the dividend payout ratio and the dividend yield of the banks?
c) To what extent does the dividend per share affect the market price per share and the dividend yield ratio?
d) What is the main motive for paying the dividend and what practice has been followed for paying such dividend?

1.3 Objectives of the Study

The main objective of the study is to analyze the dividend payment policy of the banks. The other specific objectives of the study are;

a) To analyze the dividend payment of the banks.
b) To find out the dividend payout ratio and the dividend yield of the banks.
c) To examine the relationship between the DPS and MPS, DY and DPS and DPR and MPS.
d) To determine the major motive for paying the dividend by the banks and the method followed for paying the dividend.

1.4 Significance of the Study

Due to excess liquidity and lack of investment opportunities in the capital market, nowadays people are very much interested and attracted to invest in shares for getting higher returns. When any new company issues (floats) shares through capital markets, very big congregation gathers to apply for owner's certificate. It reveals that people have

expectation on higher return for investing in shares. So the dividend decision is one of the most important decisions of financial management. It is an effective tool (way) to attract new investors, maintain present investors and controlling position of the firm.

Having lack of adequate knowledge, the people are haphazardly investing in shares. It shows that there is an extreme necessity to establish clear conception about the return that yields from investing in securities. In the Nepalese perspective, we find that there exist almost none of the companies adopting consistent dividend policy. There may be many reasons behind it. But there is not sufficient study conducted in this regard. Therefore, considering all these facts, the study is undertaken which will help to meet deficiency of the literature relating to dividend practice and price of stock. So this study is of considerable importance.

So many persons and parties such as shareholders, management of banks, financial institutions, general public (depositors, prospective customers, investors etc.) and other policy making bodies which are concerned with banking business will be benefited from this study. It is also believed that it will provide valuable inputs for future research scholars.

1.5 Limitations of the Study

The limitations of the study are as follows:

a) The accuracy of secondary data depends on the reliability of the annual reports of the concerned banks.
b) The study is focused only on dividend practice and does not cover the other financial aspects.
c) Only few banks are taken as samples to fulfill the objectives of the study.
d) This study covers five fiscal year period only.
e) Limited time and resources are also constraints.

1.6 Chapter Scheme

The study has been organized into five chapters;

Chapter – I: Introduction

It consists of background of the study, statement of the problem, objectives of the study, significance of the study and limitation of the study.

Chapter – II: Review of Literature

It includes a discussion on the conceptual framework on dividend and its practices. It also reviews the major studies relating with dividend decision of several authors/researchers and from the several books, journals and article, and thesis.

Chapter – III: Research Methodology

It explains the research methodology used to evaluate dividend practices of commercial banks in Nepal. It consists of research design, population and sample, source of data collection, method of analysis financial tools and statistical tools used in the analysis.

Chapter – IV: Data Presentation and Analysis

Chapter four fulfills the objective of the study by presenting data and analyzing them with the help of various statistical tools as per methodology. It is concluded with the findings of the study.

Chapter –V: Summary, Conclusion and Recommendations

It states summary, conclusion and recommendation of the study based on the data presentation and its analysis using the tools used in the analysis.

Besides these chapters, **Bibliography** and **Appendix** are also included at the end of the study.

CHAPTER – II
REVIEW OF LITERATURE

Under this section of the study, the conceptual framework related to the dividend has been reviewed. Besides this, the previous journals and articles, and the thesis related to the subject matter of the study have been reviewed.

2.1 Conceptual Framework

2.1.1 Dividend

"Dividends are payments made by a corporation to its shareholder members. It is the portion of corporate profits paid out to stockholders. When a corporation earns a profit or surplus, that money can be put to two uses: it can either be re-invested in the business (called retained earnings), or it can be paid to the shareholders as a dividend. Many corporations retain a portion of their earnings and pay the remainder as a dividend." *(Scholes; 2010: 127).* Thus, dividend payment is one of directors' decisions and so they use discretion in declaration of dividend. Corporations' charter vested powers to board of directors and it is up to their discretion that determines what and how much to pay by way of dividends to stockholders.

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

pre-tax expense." *(DeAngelo & DeAngelo; 2006: 76-77)* As it is clear that the dividend distribution pattern of differs by the nature of the company. Moreover, the dividend payment method also differs, in somewhere it is a fixed payment where in other companies it is paid as a percentage of the earnings.

"Dividends are usually paid in the form of cash, store credits (common among retail consumers' cooperatives) and shares in the company (either newly created shares or existing shares bought in the market.) Further, many public companies offer dividend reinvestment plans, which automatically use the cash dividend to purchase additional shares for the shareholder." *(Scholes; 2010: 129)* In short, it can be said that the companies that offer dividends are most often companies that have progressed beyond the growth phase, and no longer benefit sufficiently by reinvesting their profits, so they usually choose to pay them out to their shareholders.

2.1.2 Forms of Dividend Payment

Mainly, five forms of dividend payment have been practiced by the firms to till date.
They are;

a. Cash dividends

"Cash dividends (most common) are those paid out in currency, usually via electronic funds transfer or a printed paper check. This is the most common method of sharing corporate profits with the shareholders of the company. For each share owned, a declared amount of money is distributed." *(DeAngelo & DeAngelo; 2006: 81)* These dividends are a form of investment income and are usually taxable to the recipient in the year they are paid.

b. Stock or Scrip Dividends

"Stock or scrip dividends are those paid out in the form of additional stock shares of the issuing corporation, or another corporation (such as its subsidiary corporation). They are

usually issued in proportion to shares owned. If the payment involves the issue of new shares, it is similar to a stock split in that it increases the total number of shares while lowering the price of each share without changing the market capitalization, or total value, of the shares held." *(Lang & Litzenberger; 1999: 213)* This type of dividend is usually paid in the context when the company is in need of cash requirement, and in simultaneously is need of retaining the existing investors.

c. Property Dividends

"Property dividends are those paid out in the form of assets from the issuing corporation or another corporation, such as a subsidiary corporation. They are relatively rare and most frequently are securities of other companies owned by the issuer, however they can take other forms, such as products and services." *(Scholes; 2010: 132)* However, this type of dividend distribution technique is not till practiced in the Nepalese context and is also most rare in other part of the world.

d. Other Dividends

"These dividends can be used in structured finance. Financial assets with a known market value can be distributed as dividends; warrants are sometimes distributed in this way. For large companies with subsidiaries, dividends can take the form of shares in a subsidiary company. A common technique for "spinning off" a company from its parent is to distribute shares in the new company to the old company's shareholders. The new shares can then be traded independently." *(Lang & Litzenberger; 1999: 215)* No matter whatever the forms of the dividend may be, the purpose of the dividend payment is to retain the existing investors and even more to attract the prospective investors toward the firm.

2.1.3 Reliability of Dividends

"There are two metrics which are commonly used to gauge the sustainability of a firm's dividend policy.

Payout ratio is calculated by dividing the company's dividend by the earnings per share. A payout ratio greater than 1 means the company is paying out more in dividends for the year than it earned.

Dividend cover is calculated by dividing the company's cash flow from operations by the dividend. This ratio is apparently popular with analysts of income trusts." *(DeAngelo & DeAngelo; 2006: 90)* Dividend cover expresses a company's ability to pay ordinary dividends to shareholders out of profits earned. It shows how many times the ordinary dividend is covered by the profit available and, for example, if a company pays out one quarter of its profit as dividends, then the dividend cover ratio is four.

2.1.4 Dividend Dates

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

a. Declaration date

"It is the day the Board of Directors announces its intention to pay a dividend. On this day, a liability is created and the company records that liability on its books; it now owes the money to the stockholders. On the declaration date, the Board will also announce a date of record and a payment date." *(Elsevier & Amidu; 2006: 45)* In other word, the declaration date is the day on which a company's board of directors announces its next dividend payment. Also known as the "announcement date," this is the least important date for dividend investors to consider.

b. In-dividend date

This is the last day, which is one trading day before the ex-dividend date, where the stock is said to be cum dividend. In other words, existing holders of the stock and anyone who

buys it on this day will receive the dividend, whereas any holders selling the stock lose their right to the dividend. After this date the stock becomes ex dividend.

c. Ex-dividend date

"This is the day on which all shares bought and sold no longer come attached with the right to be paid the most recently declared dividend. This is an important date for any company that has many stockholders, including those that trade on exchanges, as it makes reconciliation of who is to be paid the dividend easier. Existing holders of the stock will receive the dividend even if they now sell the stock, whereas anyone who now buys the stock will not receive the dividend. The company does not take any explicit action to adjust its stock price; in an efficient market, buyers and sellers will automatically price this in." *(Elsevier & Amidu; 2006: 48-49)* It is relatively common for a stock's price to decrease on the ex-dividend date by an amount roughly equal to the dividend paid. This reflects the decrease in the company's assets resulting from the declaration of the dividend.

d. Book closure Date

"Whenever a company announces a dividend pay-out, it also announces a date on which the company will ideally temporarily close its books for fresh transfers of stock.

e. Record date

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

f. Payment Date

It is the day when the dividend checks will actually be mailed to the shareholders of a company or credited to brokerage accounts." *(Elsevier & Amidu; 2006: 50-52)* Along

with the dividend payment date, the dividend payment cycle of the company ends for that year.

2.1.5 Factors Influencing Dividend Decision

The dividend decision is a decision made by the directors of a company. It relates to the amount and timing of any cash payments made to the company's stockholders. The decision is an important one for the firm as it may influence its capital structure and stock price. In addition, the decision may determine the amount of taxation that stockholders pay. There are three main factors that may influence a firm's dividend decision:

- Free-cash flow
- Dividend clienteles
- Information signalling

a. The Free Cash Flow

"Under this, the dividend decision is very simple. The firm simply pays out, as dividends, any cash that is surplus after it invests in all available positive net present value projects.

Most companies pay relatively consistent dividends from one year to the next and managers tend to prefer to pay a steadily increasing dividend rather than paying a dividend that fluctuates dramatically from one year to the next." *(Baker & Jeffrey; 2004: 28-29)* However, this type of the dividend is favorable to the investors who want to bear less risk on the investment.

b. Dividend Clienteles

"A particular pattern of dividend payments may suit one type of stock holder more than another. A retiree may prefer to invest in a firm that provides a consistently high dividend yield, whereas a person with a high income from employment may prefer to avoid dividends due to their high marginal tax rate on income. This model may help to explain the relatively consistent dividend policies followed by most listed companies." *(Smith;*

2003: 99-100) Moreover, a firm may be able to maximize its stock price and minimize its cost of capital by catering to a particular clientele.

c. Information Signalling

A model developed by Merton Miller and Kevin Rock in 1985 suggests that dividend announcements convey information to investors regarding the firm's future prospects. Many earlier studies had shown that stock prices tend to increase when an increase in dividends is announced and tend to decrease when a decrease or omission is announced. Miller and Rock pointed out that this is likely due to the information content of dividends.

"When investors have incomplete information about the firm (perhaps due to opaque accounting practices) they will look for other information that may provide a clue as to the firm's future prospects. It is assumed that the managers that have access to information that indicates very good future prospects for the firm (e.g. a full order book) are more likely to increase dividends.

Investors can use this knowledge about managers' behavior to inform their decision to buy or sell the firm's stock, bidding the price up in the case of a positive dividend surprise, or selling it down when dividends do not meet expectations. This, in turn, may influence the dividend decision as managers know that stock holders closely watch dividend announcements looking for good or bad news. As managers tend to avoid sending a negative signal to the market about the future prospects of their firm, this also tends to lead to a dividend policy of a steady, gradually increasing payment." *(Miller & Rock; 1985: 118-121)* Eventually, managers have more information than investors about the firm, and such information may inform their dividend decisions. When managers lack confidence in the firm's ability to generate cash flows in the future they may keep dividends constant, or possibly even reduce the amount of dividends paid out.

2.1.6 Dividend Policy

The dividend policy theories of an enterprise are a plan of action to be followed whenever you decide about the distribution of dividends. The policy should be considered taking into account two basic objectives: to maximize the benefit of the owners of the company and provide sufficient funding.

a. All profits are distributed

This type of dividend is rarely used. The company who wants to retain the some of its profit for the extension of its activities does not follow this type of dividend pattern. Thus, the concept of all profit are distributed is not pragmatic in today's business world.

b. Not distributed dividends

"It is the opposite of the previous policy, and based on that given the tax and transaction costs exist, dividends are a luxury that neither the shareholder nor businesses can afford. Very few companies follow this policy of no dividends.

c. Both fixed on profits

Under this, the company distributes a fixed percentage of total annual earnings. This policy, more logical than the previous ones, is unusual in business, because the benefits are a random variable, so will the dividends, which often adversely affect the stock price (increase in economic risk company.

d. Stable Dividend Policy

"Formerly, many companies paid a constant dividend if it seemed clear that future profits were sufficient to keep it that way. A corollary of this policy was an attempt to avoid having to reduce dividends. Because inflation has pushed up the value of benefits has emerged called policy of steady growth rate, in which the policy framework marks a growth rate of profits and tries to match it. It is played with the reserves to offset the bad year's dividend (distributed under the same) or to accumulate excess undistributed profits

in the good. This type of policy tends to provide stability in the price, even if the upward or downward movement of the benefits appear to be durable, the company will reconsider this policy.

Extraordinary dividends, the periodic release of bonus shares, etc., are adjustment mechanisms to ease the stiffness of a constant dividend policy. Dividends are set in line with expected cash flows and are based on long-term benefits on the one hand, and dividends from the previous period, on the other. So in the short term, dividends tend to receive a smoothing in order to avoid frequent changes. This can be reconciled with the notion of the information contained in dividends that managers seem to use as a signal indicative of long-term yields." *(Michaely & Roberts; 2006: 110-112)* With the stability policy, companies may choose a cyclical policy that sets dividends at a fixed fraction of quarterly earnings, or it may choose a stable policy whereby quarterly dividends are set at a fraction of yearly earnings. In either case, the aim of the dividend stability policy is to reduce uncertainty for investors and to provide them with income.

2.1.7 Reasons for Paying Dividends

A dividend is a payment to a company's stockholders either in the form of cash or additional shares. Not all companies pay dividends. Small or high-growth companies generally do not pay dividends; large, mature companies are more likely to pay dividends. Dividend payment was the norm as recently as the early 1970s. Far fewer companies pay dividends now.

a. Profit Decision

"A profitable company has to make a choice of what to do with the profit. The decision depends on the opportunities available to the company. The company may be able to use its earnings to expand or grow the business. There may be the opportunity to grow through acquisition. The company can also retain earnings for future use, buy back stock, or pay a dividend to shareholders. All of these options can increase shareholder value.

Large mature companies may not have viable options for further growth. Companies without options for additional growth will frequently pay out a portion of their earnings to shareholders in the form of a dividend." *(Gugler; 2003: 46-47)* It is generally assumed that a matured company distributes large sections of its profit as dividend, while in contrast a growing company pays less section, or in either case does not pay, of the profit as dividend.

b. Share Price Effects

"Dividends may make a stock more attractive to investors. Payment of dividends provides stability to a company's stock price. Dividends paying stocks tend to suffer smaller losses in a down market. A company can anticipate two benefits from reduced share price volatility. Investors may be more attracted to stocks that pay dividends due to the reduced volatility. Management may also value the reduced volatility as management is often rewarded on the basis of the performance of the company's stock." *(Asquith & Mullins; 2008: 312-314)*

c. Investor Confidence

"Dividends increase investor confidence. Steady dividend payment assures investors that the company's reported profit is real. Dividends also provide assurance of the company's financial health; they are an indication that management feels the company can continue to remain profitable. Reducing or eliminating dividends sends the opposite signal to investors. Companies will generally only pay out a portion of their earnings as dividends. Retaining a portion of earnings provides a cushion to assure on-going dividends payment." *(Grullon, Michaely & Swaminathan; 2002: 390)* In fact, it has been obvious that the investors have shown much confidence in the market to invest in the share of those companies who pay the dividend regularly and in higher amount.

2.1.8 Reasons for Investors to go with Dividends

Dividend paying stocks are an excellent source of passive income and can be extensively used for building long-term wealth. The main reasons for investors to buy the stock of dividend paying firms are listed below;

a. Performance

"Companies that pay a regular dividend have been shown to provide great returns over time. They grow steadily during bull markets and yet are fairly good at reducing losses during recessions. So, wise investors are not following only the myth that dividend-paying-companies offer a lower return just because they are safer." *(Allen, Bernado & Welch; 2000: 222)* Thus, it can be stated that the companies that pay a dividend outperform companies that do not pay.

b. Diverse Returns

"When one invests in a company that does not pay dividends, one only has one way to profit: capital appreciation (increase of the stock price). The desired outcome is to watch the stock price go up, and that compromises 100% of the returns. A company that pays growing dividends, however, offers two streams of growth: dividend income and capital appreciation." *(Grullon, Michaely & Swaminathan; 2002: 401)* However, in reality, the investors invest in the stock market with the expectation of getting both the dividend income and capital gain.

c. Valuation Competency

"It's important to invest in things one understands. Out of all the companies one should evaluate for investing, one feel most competent at evaluating dividend-paying companies. Seeing historical dividend growth and comparing current yield to previous yield are two extra metrics, among others, that dividend-paying companies have over companies that do not pay a dividend.

d. Shareholder Friendly

A dividend is pretty good evidence that a company is shareholder friendly. When looking for a company to invest in, it's important to note that a great company might not make a great stock. Companies that pay dividends are taking care of the shareholders, and are likely to keep doing that." *(Allen, Bernado & Welch; 2000: 226-228)* Eventually, a great company might be overvalued in terms of share price, or it might not care about creating shareholder value.

e. Company Diligence

"Dividend-paying companies use capital more efficiently. Firstly, paying a dividend requires solid cash flow. This means that a company has to have its financials in order to know how much it can reasonably pay over the long term. Secondly, a company that has less capital to work with (due to paying some capital as dividends) will stick to investing in its best ideas, not simply all of its ideas. This means that they return money to the shareholder, and then use the rest to invest in only their very best ideas. The best part is that one can reinvest dividends into buying more shares, so one can fully embrace all of his best ideas.

f. Simplicity

Dividend stocks are generally less volatile than companies that do not pay a dividend. This is especially true if one invests in large-cap dividend payers. Moreover, dividend paying companies are excellent companies to start investing with, and are perfect for someone who is interested in building some serious wealth without feeling the need to think about investing all the time." *(Grullon, Michaely & Swaminathan; 2002: 405-408)* In fact, dividend-paying companies are an excellent option if one wants to take control of own finances without having to check on each of companies every day.

g. Management Projection

"The amount by which the company directors decide to raise dividend payouts in a given year says a lot about their confidence for the future. Past history is one thing to take note of, but the future is what really matters to investors, so it's great to get insight into managerial confidence. If management is unsure or pessimistic about the future of their company, they are likely to keep dividends conservative. If management raises dividends by a considerable amount, it shows they see great promise in their future. This is because companies that focus on increasing dividends each year have to conservatively manage their dividend payouts to ensure that they don't bite off more than they can chew, since if their projections don't work out right, they may have to cut dividends, and that always gives horrible press and angers shareholders. When a company raises dividends by a noteworthy amount, it's likely that management is optimistic about long-term future performance." *(Allen, Bernado & Welch; 2000: 231)* Hence, the dividend payment patterns of the company serve as the mirror for showing the perspectives of the management about the growth of the company.

h. Retirement

"When one retires, one can keep all of dividend investments and rely on the passive income of dividends. Once one buys into a dividend paying company, if one has made a wise investment choice and that proves to be a good investment for decades, one could literally hold onto that investment for the rest of life." *(Gugler; 2003: 51)* Thus, the payment of the dividend has also been fascinating the retiree and could act as the mode for living.

2.1.9 Dividend Theories

The literature currently advances four main theories purporting to explain the methodology of dividend policy, each of which centers on the idea of remitting residual earnings to investors:

a. Pure Residual Dividend Policy

"This theory states that when the corporation's return on equity capital is greater than the rate of return the investor could obtain by reinvesting those dividends in another investment of equivalent risk, the investor would rather the corporation act on his behalf and reinvest the earnings rather than issue a dividend; the firm can determine which option is better suited to benefiting the investor by first identifying the firm's optimal capital budget, thereby noting the level of equity capital required, and then maintaining the amount of earnings required to finance the equity capital in the capital budget and allowing "residual" funds (earnings not utilized in internal investment) after the mandated reinvestment to be issued as a dividend. Therefore, dividends are a function of earnings fluctuations, and this method allows for significant fluctuations in dividends with changes in earnings and corporate investment opportunities. In effect, all residual earnings are paid out which causes the dividend payout ratio to fluctuate. This policy also results in a dividend that varies from year to year, and when equity investment is greater than earnings, equity financing must be initiated to create a residual." *(Watts; 2004: 242-245)* Finally, it can be said that a pure residual dividend policy is a policy whereby a corporation pays out all sums left after meeting all charges against earnings, taxation and planned retentions of earnings for capital expenditure. Under this policy, dividends are likely to fluctuate sharply with variations in earnings and changes in investment plans.

b. Smoothed Residual Dividend Policy

"This theory suggests that dividend fluctuations are kept to a minimum. Dividend policy changes tend to lag behind earnings fluctuations and, as dividends are set equal to the long-run residual between forecasted earnings and investment requirements. Dividend changes, in turn, are made only when this long run residual is expected to change; earnings fluctuations believed to be temporary are ignored in setting dividend payments. The clear preference is for a stable, but increasing, dividend per share. As such, the dividend payout ratio fluctuates significantly with this payment method, and dividends have the potential to exceed the residual if earnings are unexpectedly low." *(Kalay; 2007:*

291-291) In short, under this approach, dividends are varied gradually over time. The level of dividends is so set that in the long run the total dividends paid are equal to total earnings less equity finance required to support investments.

c. Small Quarterly Dividend with Annual Bonus

"This theory suggests a small periodic dividend and a yearly bonus dividend offered to investors if earnings exceed expectations. Companies that experience wide earnings and investment fluctuations often use this policy. This option benefits both management, as they have cash flexibility, and the investors as they are guaranteed a small yearly dividend." *(Aharony & Swary; 1990: 71)* However, this theory of dividend policy has not been yet in practice in Nepalese context, rather the companies of the nation follows annual dividend payment, if disbursed.

2.1.10 Do Dividends Signal Future Success?

"Positive factors further encouraging corporations to issue dividends include the psychological perceptions of investors. The favorable behavioral reactions of stockholders to the positive signal dividends convey as well as the economic rationale for a reliable dividend policy suggest the underlying value of dividends. Although management's choice to either raise or lower a current dividend may not greatly affect the current value of the firm, these changes can have a marked effect on the market price of the stock and the opinions of both investors and company stakeholders.

Dividends serve as an indicator of the firm's present and future performance and potential risk level by lending credibility to management claims, and as such may help determine the market price of the stock. Stability in dividend policy is often necessary to eliminate uncertainty and the potential poor market valuation by investors associated with unpredictable dividend payments, and a decrease in dividends often results in a negative market response as seen by a reduction in the price of the stock. The level of the decline

in stock price is, however, often dependent upon the reason behind the dividend cut, be it poor earnings or future growth potential.

Therefore, dividend payout percentages are often raised only after a permanent increase in earnings is expected with the firm, which results in a lag between earnings and payout ratios. The dividend-signaling hypothesis is in line with the smoothed residual dividend policy. Other economic rationale behind a stable dividend includes the idea that dividends limit both the amount of expensive external financing that is needed by the firm and the associated floatation costs and investor concerns which can result. Stable dividend policy further limits the transaction costs paid by the investor when a variable dividend may result in selling or buying of shares to compensate for the deviation from needed current income. High dividends provide benefit to investors as when firms must resort to external financing methods, the unbiased opinion of the lender provides stockholders with a good indication of the firm's standing and future potential." *(Kane, Lee & Marcus; 2001: 337-339)* However, over the years the concept that dividend signaling can predict positive future performance has been a hotly contested subject. Many studies have been done to see if the market's reaction to a "signal" is significant enough to support this theory. For the most part, the tests have shown that dividend signaling does occur when companies either increase or decrease the amount of dividends they will be paying out.

2.2 Review of Journals and Articles

Tuladhar & Baskota (2007), published an article on, "*Impact of Dividend Announcement on Stock Prices",* have stated that the dividend is the cost of equity capital to equity shareholders. The dividend announcement has an impact on the market price of the shares; the market will react positively, if the dividend is up to the expectation level of the equity investors. At the same time if the dividend announcement is not the expectation level of the shareholders, the market reaction will in bear trend for that particular scrip.

In recent years the Securities Exchange Board of Nepal (SEBON) has initiated a number of reforms to make the Nepalese stock market at par with developed stock markets of the world. One of such reforms is compulsory quarterly earnings announcement and dividend announcements. This reform is based on the experiences of regulatory bodies around the world as well as the compulsions of domestic markets. The compulsory announcements will have an impact on the stock market. Researchers around the world have studied some of these impacts and it is considered as an event study. Event studies focus on the impact of various announcements like bonus issue, right issue, stock splits, earnings, dividends, mergers and acquisitions, buyback of stocks, etc.

Dividend announcements are one of the most important events and the studies on stock market reaction to earnings information are included in the semi-strong form of efficient market hypothesis (EMH). The semi-strong form of efficient market hypothesis states that stock prices reflects all the publicly available information instantaneously and accurately. In this study an attempt is on the stock market reaction to dividend announcements in Nepal in the light of various previous studies conducted in various developed countries of the world.

Satyal (2009), published an article on, *"Determinants of Dividend Payout Policy in Nepal",* has examined the relationship between the ownership structure, corporate governance and dividend payout using a large panel of Nepalese corporate firms over 2001-2008. The study documented that unobserved firm heterogeneity explains a large fraction of cross-sectional variation in dividend payout growth that exists among Nepalese corporate firms, and found in several studies. Furthermore, it is the first example of using well established dividend payout models to examine the impact of ownership structures, corporate governance and dividend payout policies in context of an emerging market. Due to high ownership concentration, the conflict between large and

controlling owners and small outside shareholders is one of the main issues in the corporate governance literature.

The study finds that ownership is one of the important variables which influence the dividend payout policies. Though the relationship is different for different class of owners and at different levels, it suggests that the ownership structure does not influence dividend payout policy uniformly. The impact changes over the change in size of the holdings as well as their identity. The results support the hypothesis, that the interest alignment between different classes of owners is one of the important factors influencing the dividend payout. The study contributes the literature of corporate governance by expanding the effect of corporate governance to another area, that of dividend payout policy, where the study finds significant effect of ownership structure on dividend payouts in case of an emerging economy, Nepal.

Baral & Gurung (2010), published an article on, *"The Announcement Effect of Cash Dividend Changes on Shares Price",* have adopted a sample of cash dividend changes from all listed A-share firms in Nepal over the period 2000 to 2009 and applied an event study in order to investigate the impact of cash dividend changes on share prices and to examine simultaneously if the dividend signaling hypothesis holds in Nepal's stock markets. The study finds that the cash dividend changes do have a considerable influence on share prices. The share prices react significantly positive to both cash dividend increases and cash dividend decreases. The result only half supports the signaling hypothesis. In fact, only the positive announcement effect for cash dividend increases fits the dividend signaling hypothesis. Cash dividend decreases, on the other hand, also have a positive announcement effect. Such a market reaction to dividend changes implies that cash dividends are welcome whether they are cash dividend increases or cash dividend decreases.

The announcement effect of cash dividend changes is positive for the sample of different listed companies, but the significance alters with sources of the sample and the event window selection. Therefore, there is no great dissimilarity between the announcement effects of cash dividend changes for different markets in Nepal. However, the empirical result of the 2002 cash dividend change sample reveals that the cash dividend changes are accompanied by stock price changes in the opposite direction. This analysis result is completely opposite to the dividend signaling hypothesis and also different from that of the 2002-2006 cash dividend change sample. Such result implies that investors react pessimistically to cash dividend increases and react optimistically to cash dividend decreases. Therefore, investors may have a negative point of view on cash dividends in 2002. However, when the ratio of cash-dividend-paying firms increased sharply after two rules we mention above were announced, cash dividends became a major source of income. Investors' attitudes towards cash dividends may turn positive, and react positively to all cash-dividend-paying firms. In short, the announcement effect of cash dividend changes and investors' attitude toward cash dividend changes may shift with time.

Rijal & Aryal (2010), published an article on, *"The Effect of Dividend Policy on the Market Price of Shares",* have stated that dividends payment is more of attractive bait for stimulating investment in Nepal. For it is unusual for the rejection of dividend declaration in favor of capital gains by share holders and neither would they advocate a reduction in the level of dividends declared for any other reason for that matter. As for the significance of dividend policy, it all boils down to the question of relevance, though the researcher is of the opinion that dividend o matter to the average Nepalese investor or potential investor as such, the development of policy on dividends by companies is nonetheless important.

The study revealed that dividends affect the demand for share price and subsequently the value of the firms. However, the dividend policy does not affect the value of firms

currently as share price fixing in regulated by the Security and Exchange Commission in respect of the quoted companies. The study insists that so many factors both internal and external to a firm have to be considered when formulating the dividend policy. Most investors buy and own shares for prestigious reasons aimed at boosting their egos and not for speculative reason. Another reason for share ownership is the fact that, share is an acceptable security in obtaining credit facility such as Bank loan. Moreover, firms do have a dividend policy that is dependent on earnings. However, the trend is not very consistent and proportionate. From the earnings and dividends over time it can be said that the size of dividend is dependent on the amount earnings as, earnings and dividend follow the same trend.

2.3 Review of Thesis

Deuja (2005), conducted a study on, *"Corporate Dividend Practices in Nepal"*, has the main objective to analyze the dividend practices in Nepal. The other specific objectives of the study are;

a. To analyze the properties of portfolios formed on dividend.
b. To examine the relationship between dividend and stock prices.
c. To test the impact of earning on dividend distribution.

The major findings of this research are:

a. Financial position of high dividend paying companies is comparatively better than that of low dividend paying companies.
b. Market price of stock of both finance and non finance and non finance sectors are affected by dividends.
c. There is a positive relationship between dividend and stock price
d. There is a negative relationship between dividend payout and earnings before tax to net worth

e. Stocks with larger ratio of DPS to book value per share have higher profitability. These profitability ratios of stocks paying larger dividends are also more variable as compared to stocks paying smaller dividends.

Budhathoki (2006), conducted a study on, *"The study of Dividend Policy of the commercial Banks in Nepal",* has the main objective to examine the dividend policy in banks. The other specific objectives of the study are;

a. To compare the dividend policy followed by different commercial banks chosen.
b. To analyze the relationship of dividend on other financial indicators.
c. To provide the sample banks with some fruitful suggestion that can be implemented easily and possible guideline to overcome various issues and gaps based on the findings of the analysis.

The major findings of this study are:

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

Ghimire (2007), conducted a study on, *"Dividend Policy of Listed Companies with Reference to Banks, Finance and Insurance Companies",* has the main objective to examine the dividend policy of listed companies. The other specific objectives of the study are;

a. To identify the regularity of divided distribution of different listed companies.
b. To identify the relationship between dividend policy and other financial indicators.

c. To find out whether dividend policy affect the value of the firm or not.
d. To analyze the relationship between DPS and MPS.
e. To provide suggestion for the improvement of sample companies dividend policy on the basis of findings.

The major findings of the study are:

a. The average dividend per share of the banks is satisfactory compared to finance and insurance companies.
b. The average earning per share of the bank is also more satisfactory than finance and insurance companies.
c. DPS of the finance companies are more fluctuating in comparison to banks among them HBL has more fluctuation and NGBL being consistent.
d. Dividend yield of the finance and insurance are higher than banks and more consistent too.
e. Banks are following aggressive dividend policy due to higher DPR whereas finance and insurance companies implemented moderate dividend policy.

Sherpa (2008), conducted a study on, *"A comparative study of Dividend Policy in Nepal Investment Bank Ltd. and Standard Chartered Bank Ltd.",* has the main objective to identify the dividend policy in SCBNL and NIBL. The other specific objectives of the research are;

a. To examine the relationship between earning and dividend distribution.
b. To evaluate the impact of dividend on share price.
c. To examine the relationship of DPS with other financial indicators.

The major findings of the study are;

a. The shareholders of SCBNL received comparatively very high DPS than the shareholders of NIBL. On average, SCBNL paid Rs. 110 DPS, whereas NIBL paid Rs. 14.50 DPS.

b. SCBNL remained more successful than NIBL in generating earning per share. On average, SCBNL earned Rs. 155.84 per share, while NIBL earned only Rs. 50.54.
c. The DPR of SCBNL is also very high compared to that of NIBL. The average DPR of SCBNL is 70.59% and that of NIBL is 28.69%.
d. DPS has high influence on the price rise/fall of share. Both MPS and BPS are highly dependent on the DPS of corresponding banks.
e. The prime objective to invest in bank is to earn dividend. About 78% of the respondents stated that dividend is the most alluring factor in share investment.
f. There exists high correlation between DPS and EPS, DPS and MPS and DPS and BPS of both banks.

Bohara (2009), conducted a study on, *"A Comparative Study of Dividend Policy in Commercial Bank",* has the main objective to find out the dividend policy in CBs. The other specific objectives of this study are:

a. To find out the impact of dividend on share prices.
b. To analyze the relationship of financials indicators.
c. To examine if there is any uniformity among DPS, EPS and DPR on the six sample banks.

The major findings of this study are:

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

Majhi (2010), conducted a study on, *"A Study on Dividend Policy in Finance Companies",* has the main objective to examine the dividend policy followed by finance companies. The other specific objectives of the research are;

a. To compare the dividend paid by Annapurna Finance Company Ltd. and Butwal Finance Ltd.
b. To examine the relationship between DPS with EPS, MPS and BPS.
c. To predict DPS in future years.

The major findings of the study are;

a. The shareholders of AFCL enjoyed higher DPS than those of BFL.
b. AFCL made more EPS than BFL. However, DPR of BFL is higher than DPR of AFCL, which indicates that BFL has concentrated on attracting new shareholders by distributing more portion of its earning while AFCL focused on retaining earning for internal financing.
c. There is high positive relationship between DPS and EPS of AFCL and the relationship is statistically significant. However, the relationship between DPS and EPS of BFL is positive but the relationship is insignificant.
d. The correlations coefficient indicates that MPS increases with the increase in DPS of each bank and the relationship is positively significant.
e. The regression analysis indicates that the MPS of both banks is highly dependent on the DPS and EPS of corresponding banks.

2.4 Research Gap

All of the above research focused on the secondary data analysis to examine the dividend distribution pattern in listed companies. However, for the examination of dividend policy, the analysis of primary data is also equally important. Keeping this fact into consideration, the present study embraces both the secondary data and primary data to analyze the dividend practices and its impact on market price. Further, the study uses multiple regression analysis to trace out the joint effect of EPS and DPS on MPS.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology sets the sketch of the study. It defines what activity is to be done, how it would be done, and what data will be followed. A researcher can get data from both primary and secondary sources. The secondary sources are the ones that have been already available or published, for instance the annual reports, brochures, magazines, journals and others. However, the primary sources demand the collection of the data by the researcher himself. A questionnaire can be a good source of primary data. The researcher, however, has collected data from both secondary sources and the primary sources.

3.1 Research Design

The main objective of this research work is to ascertain the dividend practice and its impact on investors of commercial banks. To complete this study, following design and format has been adopted.

First of all, information and data are collected. Both primary and secondary data are collected. The important information and data are selected. Then data are arranged in useful manner. After that, data are analyzed by using appropriate financial and descriptive and analytical tools. In analysis part, interpretation and comments are also made wherever necessary.

3.2 Population and Sample

At present, there are 32 commercial banks, including recently operated Mega Bank Limited, operating in Nepal. However, only 23 commercial banks are listed in NEPSE. Due to limited time and resource factors, it is not possible to study all of them regarding the study topic. Therefore, sampling has been done selecting from population. The samples to be selected are as follows:

(i) Standard Chartered Bank Nepal Limited

(ii) Nabil Bank Limited

(iii) Everest Bank Limited

(iv) Bank of Kathmandu Limited

(v) Himalayan Bank Limited

3.3 Sources of Data

The study is based on both the secondary data and primary data. The secondary data are collected mainly from the annual reports of SCBNL, NABIL, EBL, BOK and HBL, especially financial indicators presented by the banks. Besides these, the circulars and annual reports of NRB, annual reports of SEBON and NEPSE, the official website of the sampled banks has been equally visited for the data collection. For the collection of the primary data, the questionnaire has been used.

3.4 Research Tools

To achieve the objectives of the research, the following financial and statistical tools will be used.

3.4.1 Financial Tools

a) Earning Per Share (EPS)

Earning per share refers the rupee amount earned per share of common stock outstanding. It measures the return of each equity shareholders. EPS is computed to know the earnings capacity and to make comparison between concerned banks. This ratio can be computed by dividing the earning available to common shareholders by the total number of common stock outstanding of banks. Thus,

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

b) Dividend Per Share (DPS)

Dividend per share indicates the rupee earnings actually distributed to common stockholders per share held by them. It measures the dividend distribution to each equity shareholders. It is defined as the result received by dividing the total dividend distributed to equity shareholders by the total number of equity shares outstanding. Thus,

$$\text{DPS} = \frac{\text{Total amount of dividend paid to ordinary shareholders}}{\text{Number of ordinary shares outstanding}}$$

c) Dividend Payout Ratio (DPR)

It is the portion of the earning used for the payment of dividend. The dividend payout ratio is the earnings paid to the equity holders from the earnings of a firm in a particular year. This ratio shows what percentage of the profit is distributed as dividend and what percentage is retained as reserve and surplus for the growth of the banks. This ratio is calculated by dividing dividend per share by the earning per share. Thus,

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

d) Dividend Yield (DY)

Dividend yield is a percentage of dividends per share on market price per share. It shows that how much is the dividend per share on market price per share. It measures the dividend in relation to market value of share. This ratio is calculated by dividing dividend per share by market price of the stock. Thus,

$$\text{DY Ratio} = \frac{\text{Dividend per share}}{\text{Market price per share}}$$

3.4.2 Statistical Tools

a) Arithmetic Mean or Average ($\bar{X}$)

An average is a single value that represents a group of values. It depicts the characteristic of the whole group. It is a representative of the entire mass of homogeneous data, its value lies somewhere in between the two extremes, i.e. the largest and the smallest items. It is obtained by dividing the sum of the quantities by the number of items. Thus,

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

Where,

$\sum X$ = sum of the sizes of the items

N= number of items

b) Standard Deviation (S.D.)

It is the most usual measure of dispersion and it represents the square root of the variance of a group of numbers, i.e., the square root of the sum of the squared differences between a group of numbers and their arithmetic mean. Generally, it is denoted by small Greek letter σ (read as sigma) and is obtained as follows.

$$\text{S. D. } (\sigma) = \sqrt{\frac{\sum(X - \bar{X})^2}{N}}$$

Where,

N = Number of items in the series.

$\bar{X}$ = mean

X = Variable

The standard deviation measures the absolute dispersion or variability of a distribution; the greater the amount of dispersion or variability the greater the standard derivation, for the greater will be the magnitude of the deviations of the values from their mean.

c) Coefficient of Variation (C.V.)

Karl Pearson developed this measurement to measure the relative dispersion. It is used in such problems where we want to compare the variability of two or more series. It is denoted by C.V. and is obtained by dividing the arithmetic mean to standard deviation. Thus,

$$C.V. = \frac{\sigma}{\bar{x}} \times 100$$

d) Coefficient of Correlation

The correlation analysis refers to the techniques used in measuring the closeness of the relationship between the variables. It helps us in determining the degree of relationship between to or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number, which indicates to what extent two things (variables) are related to what extent variations in one go with the variations in the other.

The value of coefficient of correlation as obtained shall always lie between ± 1, a value of –1 indicating a perfect negative relationship between the variables, of +1 a perfect positive relationship, and of no relationship when correlation coefficient is zero. The zero correlation coefficient means the variables are uncorrected. It is defined by Karl Pearson as:

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2}\sqrt{N \sum Y^2 - (\sum Y)^2}}$$

e) Regression Analysis

Regression is a statistical method for investing relationships between the variables by the establishment of an approximate functional relationship between them. It is considered as a useful tool for determining the strength of relationship between two (Simple Regression) or more (Multiple regression) variables.

f) Probable Error

The probable error denoted by P.E. is used to measure the reliability and test of significance of correlation coefficient. Significance of relationship has been tested by using the probable error (P.E.) and it is denoted by the following model:

$$\text{Probable Error (P. E.)} = 0.6745\text{X}\frac{1-\text{r}^2}{\sqrt{\text{n}}}$$

Where, r = the value of correlation coefficient

n = number of pairs of observations

if r < P.E., it is insignificant, i.e. there is no evidence of correlation

if r > 6 P.E., it is significant

if P.E. < r < 6 P.E., nothing can be concluded

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

4.1 Secondary Data Analysis

Under this section of the study, the data related to the dividend policy of the banks have been extracted from the annual reports and presented in tabular form, and then interpreted.

4.1.1 Dividend Per Share

Dividend per share is the amount of dividend distributed to the shareholders for the single unit of share. Higher the amount of DPS retains the shareholder for long term. Both cash dividend and bonus share dividend distributed to the shareholders of the sampled banks is presented in the Table 4.1.

Table 4.1

Dividend Per Share (Unit in Rs.)

FY	SCBNL	NABIL	EBL	BOK	HBL
2005/06	140	85	25	48	35
2006/07	130	140	40	20	40
2007/08	130	100	50	42.11	45
2008/09	100	85	60	47.37	43.56
2009/10	70	70	60	30	36.84
Mean	**114.00**	**96.00**	**47.00**	**37.50**	**40.08**
S.D.	**25.77**	**23.96**	**13.27**	**10.88**	**3.81**
C.V.%	**22.60**	**24.96**	**28.23**	**29.01**	**9.51**

(Source: Appendix II)

Except EBL, which has signaled the much concern paid to the investors and thus has increased dividend amount for the first four fiscal years, the dividend amount of other

banks have fluctuated during the periods. The most of the banks, however, started to decrease the dividend amount from the fiscal year 2008/09. Various factors, such as worldwide economic crisis, difficulty to sustain liquidity, necessity of high retained earnings, and other macroeconomic factors etc. could have affected the decreasing of dividend amount simultaneously in most of the commercial banks of the nation. More specifically, it has been ascertained that the dividend of SCBNL has been Rs. 140 in the fiscal year 2005/06, then Rs. 130 in next two fiscal years, Rs. 100 in the fiscal year 2008/09, and finally Rs. 70 in the fiscal year 2009/10. The bank has distributed dividend that worth Rs. 114 in average, and the variation in the distribution is 22.60%.

Similarly, NABIL has atrociously raised its dividend from Rs. 85 in the fiscal in the fiscal year 2005/06 to Rs. 140 in the fiscal year 2006/07, and such action categorically has increased the affectionate of it towards the investors. However, the bank could not stable such affectionate in the forthcoming periods, since the bank has to decrease the dividend amount in the coming periods. Despite the bank being the highest profit making commercial banks in non-government banks in the fiscal year 2008/09 and being the matured banks, NABIL has decreased its dividend amount in such years, which indicates that the bank should have needed high retained earnings to finance its assets. The dividend distributed by the bank in the fiscal year 2009/10 is just Rs. 70, the lowest recorded during the five year periods. In average, the bank has distributed Rs. 96 dividend and the variation in the distribution is 24.96%.

The dividend distribution amount of EBL is lower, however, the gradual increment in the dividend amount by EBL certainly is appreciable, as the bank has increased the dividend for the first four fiscal years, i.e. from Rs. 25 to Rs. 60, and then distributed the dividend equal to that of the previous year in the fiscal year 2009/10. As EBL is the moderate profit making bank, the dividend distributed, although low in comparison to that of NABIL & SCBNL, of the bank is somewhat reasonable. Whatever, EBL in average has

distributed Rs. 47 per share as dividend to its investors, and the variation in the distributing pattern is 28.23%.

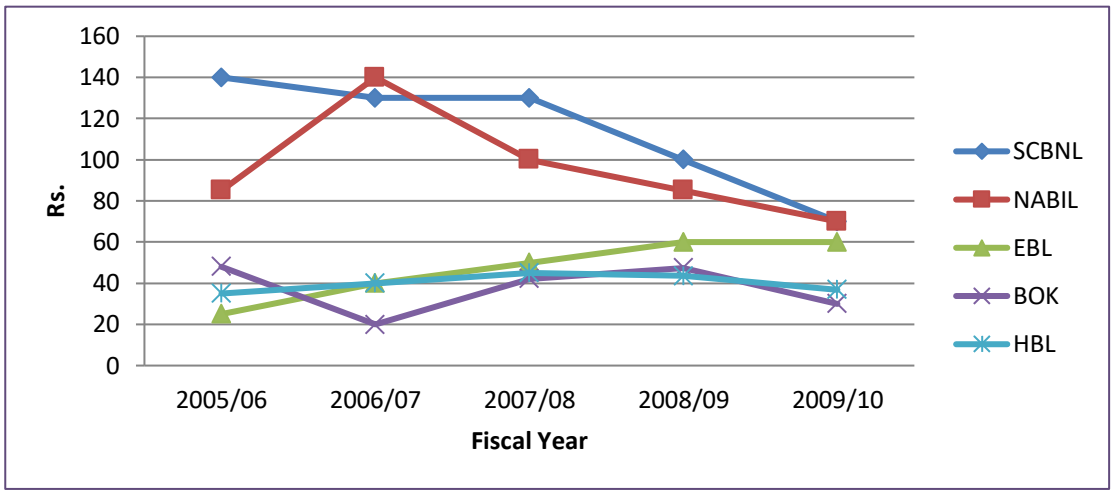
Moreover, the dividend distribution of BOK is in fluctuating trend. At the inception, the dividend distributed by the bank is Rs. 48 per share, however, such distribution has promptly reduced sharply to Rs. 20 per share in the fiscal year 2006/07. Again the bank has awfully increased the dividend to Rs. 42.11 per share in the fiscal year 2007/08 and then to Rs. 47.37 per share in the fiscal year 2008/09, and finally the dividend has been reduced to Rs. 30 per share in the fiscal year 2009/10. Consequently, the bank has distributed Rs. 37.50 per share as dividend, and the variation in the distribution amount is 29.01%. The swing in the dividend has certainly bewildered the investors and created uncertainly about the trend in the dividend amount in the forthcoming periods.

On the other side, HBL has increased its dividend amount for the first three fiscal years, i.e. from Rs. 35 per share to Rs. 40 per share, and decreased the dividend to Rs. 43.56 per share in the fiscal year 2008/09, when the dividend and MPS of most the banks have started to fall, and to Rs. 36.84 per share in the fiscal year 2009/10. Despite being the leading bank in collecting deposit and flowing loan till the fiscal year 2007/08, HBL could not become the leading bank in profit earning, thus the lower dividend of HBL in comparison to that of SCBNL & NABIL is justified in sense. Nonetheless, the bank in average has distributed Rs. 40.08 per share as dividend and the variation in the amount is 9.51%.

On the basis of the average dividend per share, it can be categorically deducted that SCBNL is still the most lucrative bank for the investors. However, it should not be ignored that the decrement in the dividend amount by the bank has somewhat actuated desperation among the investors. Alternatively on the basis of the trend of dividend, the increasing dividend distribution of EBL is enticing to the optimistic investors.

Figure 4.1

Dividend Per Share



4.1.2 Dividend Payout Ratio

Dividend payout ratio measures the percentage of dividend paid out of the net profit after tax. It also clears about the retained earning, since net profit is composed of dividend and retained earning only. Higher dividend payout ratio attracts the shareholders and consequently increases the market price of share. The dividend payout ratio of the sampled banks is presented in the following Table 4.2.

Table 4.2

Dividend Payout Ratio **(Ratio in %)**

FY	SCBNL	NABIL	EBL	BOK	HBL
2005/06	79.62	65.78	39.82	109.92	59.08
2006/07	77.67	102.13	51.01	45.98	65.94
2007/08	98.54	92.33	54.45	70.25	71.72
2008/09	90.92	79.62	60.01	86.63	70.37
2009/10	90.15	89.05	59.90	69.64	115.85
Mean	**87.38**	**85.78**	**53.04**	**76.48**	**76.59**
S.D.	**7.74**	**12.32**	**7.44**	**21.15**	**20.12**
C.V.%	**8.85**	**14.36**	**14.02**	**27.66**	**26.27**

(Source: Appendix II)

For the first three fiscal years, the dividend payout ratio of the SCBNL has been increased with the intention of driving the attention of the investors toward the bank. The dividend payout ratio of the bank has thus ranged from 79.62% to 98.54% within these first three fiscal year periods. In average, the bank has distributed 87.38% of the total earnings as dividend, and the variation in payout ratio is 8.85%. The reason behind paying the high dividend could be to retain the existing investors, to attract the potential investors toward it, and also to apprise that the bank has been earning satisfactory profit. However, the dividend payout ratio of the NABIL has not followed any specific trend. The dividend payout ratio of NABIL has increased for the first two fiscal years, i.e. from 65.78% in the fiscal year 2005/06 to 102.13% in the fiscal year 2006/07, and then decreased in the next two fiscal years, and finally reached to 89.05% in the fiscal year 2009/10. The bank, in average, has paid 85.78% of its earnings as dividend to the investors.

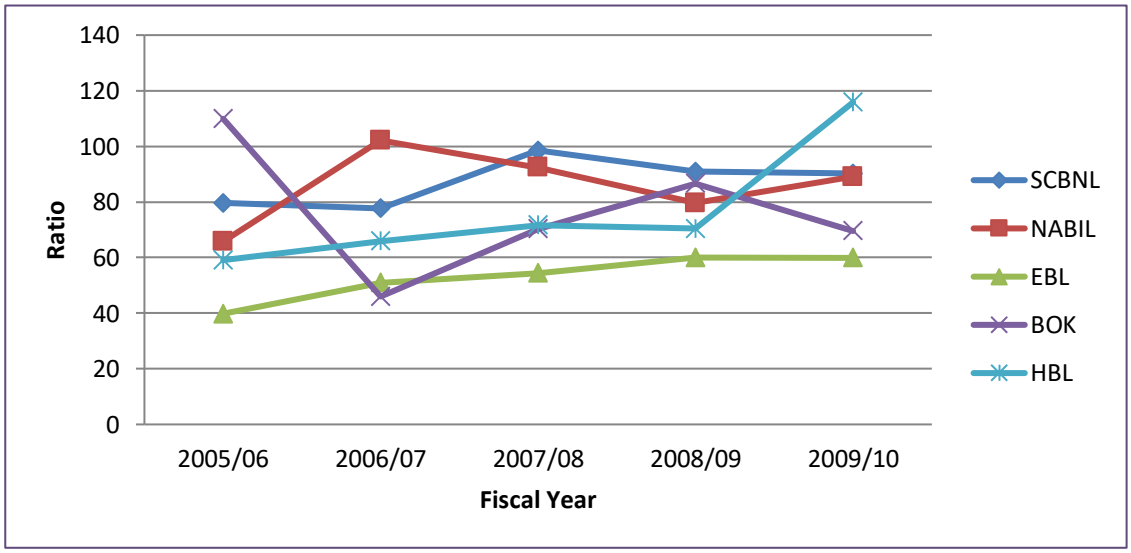
EBL, in other side, has increased the dividend payout ratio for the first four fiscal years, and in the fiscal year 2009/10, there is subtle change in the DPR as compared to that in the fiscal year 2008/09. The DPR of the bank has ranged from 39.82% in the fiscal year 2005/06 to 60.01% in the fiscal year 2008/09. Though lower than the DPR of SCBNL and NABIL, this gradual increment in DPR of EBL will certainly help to strengthen the intimacy between the bank and the investors. In average, EBL has 53.04% of the total earnings as dividend. In contrast to the DPR of EBL, the DPR of BOK has widely oscillated during the periods. At the inception of the observation periods, the DPR of the bank is 109.92%, indicating that the BOK has paid dividend even from its reserves. The bank, however, has sharply reduced such DPR to 45.98% promptly in the fiscal year 2006/07, and by the end of the fiscal year 2009/10, the DPR has been observed to be 69.64%. In average, the DPR of BOK is 76.48% of the EPS.

Moreover, it has been observed that the dividend payout ratio of HBL has also been quite fascinating to the investors, as the DPR of the bank has increased in the observed periods, except in the fiscal year 2008/09, when there is subtle decrement in the DPR. The dividend payout ratio of the bank has ranged from 59.08% in the fiscal year 2005/06 to 115.85% in the fiscal year 2009/10. The DPR in the fiscal year 2009/10 has shown great magnanimity of the bank toward its shareholders by paying the additional amount not covered by earnings of that year from the reserves. In average, HBL has paid 76.59% of the total earnings as DPR.

Paraphrasing the analysis, it can be concluded that SCBNL is more concerned to retain its investors than the other banks do, since the average DPR of SCBNL is highest and even there is highest uniformity in the DPR of this bank. Except EBL, other three remaining banks have paid dividend more than the earning in some fiscal years, which indicates the greater crave of the bank to entice the investors. However, the bank instead should contemplate on the retained earnings as well, since keeping no retained earnings may actuate the bank to have the problem of insufficient capital in the forthcoming years.

Figure 4.2

Dividend Payout Ratio



4.1.3 Dividend Yield

Dividend yield is a percentage of dividends per share on market price per share. It shows that how much is the dividend per share on market price per share. The dividend yield ratio of the observed banks during the five year period is presented in the following Table 4.3.

Table 4.3

DY Analysis **(Ratio in Times)**

FY	SCBNL	NABIL	EBL	BOK	HBL
2005/06	26.96	26.35	55.16	17.71	31.43
2006/07	45.38	36.07	60.75	68.75	43.50
2007/08	52.54	52.75	62.64	55.81	44.00
2008/09	60.10	57.64	40.92	38.53	40.40
2009/10	46.84	34.06	27.17	28.00	22.15
Mean	**46.37**	**41.37**	**49.33**	**41.76**	**36.30**
S.D.	**10.99**	**11.84**	**13.44**	**18.46**	**8.39**
C.V.%	**23.71**	**28.62**	**27.25**	**44.21**	**23.11**

(Source: Appendix II)

The table manifests that the dividend yield of SCBNL has been in increasing trend for the first four fiscal years. More concisely, the dividend yield of the bank has ranged from 26.96 times in the fiscal year 2005/06 to 60.10 times in the fiscal year 2008/09, and in the fiscal year 2009/10 it is 46.84 times. The increasing trend of the dividend yield indicates that the investors are willing to pay more in the market to acquire the share of SCBNL, assuming that the bank will pay satisfactory dividend. Whatever, in average, the bank dividend yield of the bank has been ascertained to be 46.37 times, and the variation in the yield is 23.71%. Alike in SCBNL, in NABIL as well the dividend yield of the bank has been increased for the first four fiscal years and then decreased in the final year. The dividend yield of NABIL has ranged from 26.35 times in the fiscal year 2005/06 to 57.64 times in the fiscal year 2008/09, and in average, the dividend yield of the bank is 41.37 times with the variation of 28.62%.

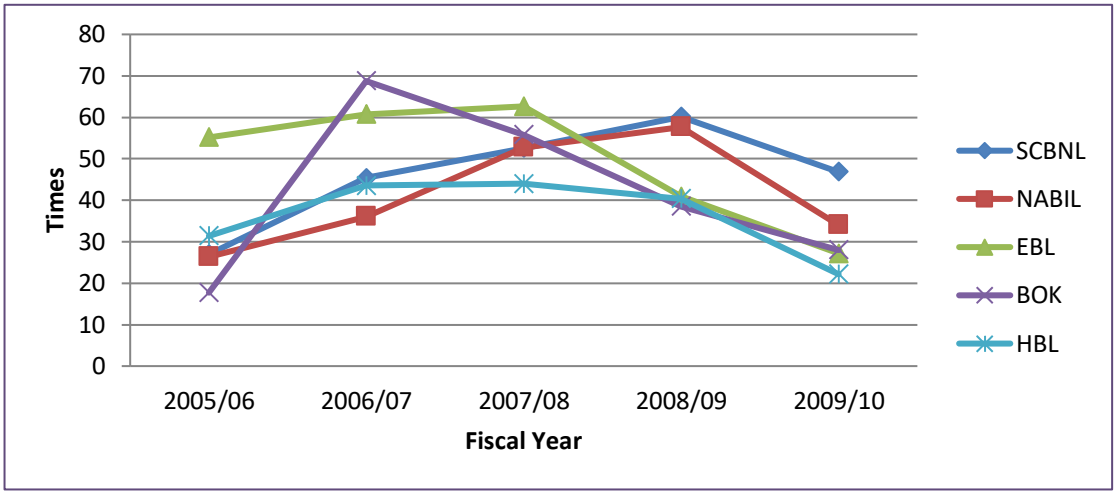
In contrast to the dividend yield of aforementioned banks, the dividend yield of EBL has been in fluctuating trend. The dividend yield of EBL has ranged from 27.17 times in the fiscal year 2009/10 to 62.64 times in the fiscal year 2007/08. The table elaborates that the investors have paid more amount in the initial periods to acquire the shares of EBL and finally to earn the same per rupee dividend. In other words, the rate of increment in divided amount is quite higher than the rate of increment in MPS of the bank in later periods. In average, the dividend yield of the bank is 49.33 times, indicating that the investors have paid Rs. 49.33 to acquire a single share for gaining Rs. 1 dividend.

Moreover, it has also been observed that the dividend yield of BOK has swung during the observed periods, and thus the dividend yield of the bank has ranged from 17.71 times in the fiscal year 2005/06 to 68.75 times in the fiscal year 2006/07, whereas the dividend yield in the fiscal year 2009/10 has been ascertained to be 28.00 times and in average it is 41.76 times, with the variation of 44.21%. The dividend yield, however, in HBL has ranged from 31.43 times in the fiscal year 2005/06 to 44.00 times in the fiscal year 2007/08, and in the fiscal year 2009/10, it has been ascertained to be 22.15. Consequently the average dividend yield of the bank is 36.30 times, indicating that the investors are paying 36.30 times more amount in purchasing the share price of HBL to gain Rs. 1 dividend, and the variation in such payment is 23.11%.

Finally on the basis of the average dividend yield, it can be assumed that the investors would be more benefited from the investment in shares of HBL, since the dividend yield of HBL is lowest, and thus the investors are bearing low cost than those of other banks to earn same per rupee dividend. In contrast, the investors of EBL are paying more amount that those of other banks to yield same per rupee dividend.

Figure 4.3

Dividend Yield



4.1.4 Relationship between DPS and MPS

4.1.4.1 Correlation Test between DPS and MPS

Assuming that the change in the MPS of the banks depends upon the change in the DPS, the correlation coefficient between these two variables has been tested.

Table 4.4

Correlation Test between DPS and MPS

Bank	r	r^2	P.E.	6P.E.	Result
SCBNL	0.4130	0.1706	0.2502	1.5011	Insignificant
NABIL	0.6312	0.3984	0.1815	1.0889	Insignificant
EBL	0.3625	0.1314	0.2620	1.5720	Insignificant
BOK	0.2354	0.0554	0.2849	1.7096	Insignificant
HBL	0.8879	0.7883	0.0639	0.3832	Significant

(Source: Appendix - III)

The table reveals that the dividend is not the sole determinant of the MPS, though DPS is considered crucial for changing the value of MPS. Although the relationship between the DPS and MPS of all the observed banks has been found to be in positive, their relationship is not so strong, except in HBL, as evidenced by the relationship between the

'r' value and the 6 P.E. The calculated 'r' value of SCBNL is 0.4130, NABIL is 0.6312, EBL is 0.3625, BOK is 0.2354, and HBL is 0.8879. The coefficient of determination also buttress to conclude that 17.06% change in MPS of SCBNL, 39.84% change in MPS of NABIL, 13.14% change in MPS of EBL, 5.54% change in EBIT of BOK and 78.83% change in EBIT of HBL has been explained by the change in DPS. Nevertheless, there exists insignificant relationship between DPS and MPS of SCBNL, NABIL, EBL and BOK and thus such changes could not be verified. Thus, only the DPS of HBL has significant impact on its MPS.

4.1.4.2 Regression Test of MPS on DPS

Let the dependent variable MPS is denoted by Y and independent variable DPS is denoted by X, then the regression equation of MPS on DPS calculated in Appendix has been presented in the table.

Table 4.5

Regression Test of MPS on DPS

Bank	a	b	Equation
SCBNL	2637.96	22.11	MPS = 2637.96 + 22.11 DPS
NABIL	531.43	35.81	MPS = 531.43 + 35.81 DPS
EBL	1395.89	17.22	MPS = 1395.89 + 17.22 DPS
BOK	976.45	12.58	MPS = 976.45 + 12.58 DPS
HBL	-2657.18	103.20	MPS = -2657.18 + 103.20 DPS

(Source: Appendix - III)

Analyzing the regression of MPS on DPS, it has been found that the MPS of SCBNL has positive relationship with the DPS of the bank, and thus the MPS of SCBNL increases by Rs. 22.11 with per rupee increment in DPS, if the variable 2637.96 remains constant. Likewise, the DPS of NABIL has positive influence on the MPS, and thus the MPS increases by Rs. 35.81 due to Rs. 1 increment in the DPS of the bank, if the variable 531.43 remains stable. Likewise, the MPS of EBL increases by Rs. 17.22, the MPS of BOK increases by Rs. 12.58 and the MPS of HBL increases by Rs. 103.20 with per rupee

increment in the DPS, and assuming the other respective factor remaining constant. The regression analysis aided to substantiated the derived assumption that the impact of DPS is highest in HBL, as the change in MPS due to the same per rupee change in DPS is highest in HBL.

4.1.5 Relationship between DPS and DY

4.1.5.1 Correlation Test between DPS and DY

Dividend yield has the inverse relationship with the DPS and direct relationship with the MPS. Thus it has been presumed that the investors will cost less to acquire the shares in proportion to the increment in DPS.

Table 4.6

Correlation Test between DY and DPS

Bank	r	r^2	P.E.	6P.E.	Result
SCBNL	-0.4480	0.2007	0.2411	1.4466	Insignificant
NABIL	-0.0080	0.0001	0.3016	1.8098	Insignificant
EBL	-0.6345	0.4025	0.1802	1.0813	Insignificant
BOK	-0.5865	0.3440	0.1979	1.1874	Insignificant
HBL	0.7642	0.5840	0.1255	0.7530	Significant

(Source: Appendix -IV)

In most of the banks, except in HBL, the ascertained correlation coefficient between dividend yield and DPS of the bank substantiates the presumption that dividend yield has inverse relationship with the DPS of the bank. The correlation coefficient between the DPS and MPS of SCBNL is -0.4480, of NABIL is -0.0080, of EBL is -0.6345, of BOK is -0.5865 and while that of HBL is 0.7642. The coefficient of determination indicates that 20.07% change in DPS of SCBNL, 0.01% change in DPS of NABIL, 40.25% change in DPS of EBL, 34.40% change in DPS of BOK and 58.40% change in DPS of HBL has been caused to the variation in dividend yield. However, except in HBL, the assumed variation in DPS could not be due to change in DPS only, since the calculated ‘r’ of each

bank, excluding HBL, is lower than the its corresponding 6 P.E. Eventually, it can be concluded that in HBL, the increase in DPS also increases the MPS, as verified in above section, and thus the increment rate in MPS is high, as a consequence the DY of this bank increases.

4.1.5.2 Regression Test between DY on DPS

Let dividend yield be denoted by Y and dividend per share be denoted by X, then the regression line of dividend yield on earning yield is presented in the table.

Table 4.7

Regression Test of DY on DPS

Bank	a	b	Equation
SCBNL	68.16	-0.19	DY = 68.16 – 0.19 DPS
NABIL	41.75	-0.004	DY = 41.75 – 0.004 DPS
EBL	79.54	-0.64	DY = 79.54 – 0.64 DPS
BOK	79.09	-1.00	DY = 79.09 – 1.00 DPS
HBL	-31.12	1.68	DY = -31.12 + 1.68 DPS

(Source: Appendix -IV)

As per the regression analysis test of DY on DPS, it has been found that the dividend yield of SCBNL has negative relationship with the DPS, and thus the dividend yield of this bank decreases by 0.19 times with per rupee increment in the DPS of SCBNL. Also, the dividend yield of NABIL has negative relationship, and with the per rupee increment in the DPS of the bank, the dividend yield of NABIL decreases by 0.004 times. Also, the dividend yield of EBL and BOK decreases by 0.64 times and 1.00 times respectively with the same per rupee increment in the dividend of the respective banks. However, in HBL, it has been found that the dividend per share instead increases the dividend yield of the bank by 1.68 times, if the other variable, -31.12, remains constant. Eventually, it can be assumed that the impact of DPS on dividend yield is highest in HBL in comparison to that in other banks.

4.1.6 Relationship between MPS and DPR

4.1.6.1 Correlation Test between MPS and DPR

For the study, it has been assumed that the investors pay more concern with the DPR of the banks, and thus the increment in the MPS of the bank is due to the increase in DPR. To test this presumption, the correlation coefficient and probable error have been performed.

Table 4.8

Correlation Test between MPS and DPR

Bank	r	r^2	P.E.	6P.E.	Result
SCBNL	0.3748	0.1404	0.2593	1.5557	Insignificant
NABIL	0.5959	0.3550	0.1945	1.1673	Insignificant
EBL	0.4084	0.1668	0.2513	1.5081	Insignificant
BOK	-0.2507	0.0628	0.2827	1.6962	Insignificant
HBL	-0.5915	0.3499	0.1961	1.1766	Insignificant

(Source: Appendix -V)

As shown in table, the correlation coefficient between dividend payout ratio (DPR) and market price per share of SCBNL, NABIL, EBL, BOK and HBL is 0.3748, 0.5959, 0.4084, -0.2507 and -0.5915 respectively. Coefficient of determination (r^2) of SCBNL is 0.1404, which shows DPR of SCBNL explains 14.04% variations in the MPS. Likewise, according to the same table, coefficient of determination (r^2) of NABIL is 0.3550, which explains that the variation in the DPR explains 35.50% of variations in MPS, EBL is 0.1668, indicating 16.68% change in MPS is due to the change in DPR, BOK is 0.0628, revealing 6.28% change in MPS is due to the change in DPR, and HBL is 0.3499, suggesting that 34.99% variation in MPS is explained by change in DPR.

Since, absolute value of 'r' of SCBNL (0.3748) is lower than 6 P.E. (1. 5557), NABIL (0.5959) is lower to its corresponding 6 P.E. (1.1673), EBL (0.4084) is lower than its 6 P.E. (1.5081), BOK (0.2507) is lower than its 6 P.E. (1.6962) and HBL (0.5915) is lower

than its 6 P.E. (1.1766), the relationship between DPR and MPS is insignificant, which means that the increase in DPR does not necessarily mean the increase in MPS.

4.1.6.2 Regression Test of MPS on DPR

Let MPS be denoted by Y and DPR be denoted by X, then the regression line of Y on X is given by:

Table 4.9

Regression Test of MPS on DPR

Bank	a	b	Equation
SCBNL	-680.52	66.83	MPS = -680.52 + 66.83 DPR
NABIL	-1670.75	65.75	MPS = -1670.75 + 65.75 DPR
EBL	369.98	34.60	MPS = 369.98 + 34.60 DPR
BOK	1974.67	-6.89	MPS = 1974.67 – 6.89 DPR
HBL	2476.84	-13.03	MPS = 2476.84 – 13.03 DPR

(Source: Appendix -V)

The table depicts the linear relationship between stock price (MPS) and dividend payout ratio (DPR) of concerned banks. In SCBNL, beta coefficient is 66.83, which indicates that a one percent decrease in dividend payout ratio (DPR) leads to an average Rs. 66.83 increase in market price per share (MPS), if all other things being same. Likewise, the MPS of NABIL increases by Rs. 65.75 due to one percent increment in the DPS, if the other variable -1670.75 remains stable. Moreover, the MPS of EBL increases by Rs. 34.60 with one percent increases in the DPR of the bank. In contrast, the MPS of BOK decreases by Rs. 6.89 with one percent increase in the DPR, and the MPS of HBL decreases by Rs. 13.03 due to per percent increase in DPR, if the other variable, 2476.84, remains constant. Finally, it can be assumed that the impact of DPR on MPS is highest in SCBNL, on the basis of the change in MPS due to change in same one percent DPR.

4.1.7 Relationship of MPS with DPS and EPS

4.1.7.1 Multiple Correlations Test of MPS with DPS and EPS

Let correlation between MPS and DPS be denoted by r_{12}, DPS and EPS be denoted by r_{23} and MPS and EPS be denoted by r_{13}. Then the multiple correlation coefficient of MPS on DPS and EPS is given by;

$$R_{1.23} = \sqrt{\frac{r^2_{12} + r^2_{13} - 2\, r_{12}\, r_{23}\, r_{13}}{1-r^2_{23}}}$$

Table 4.10

Multiple Correlations Test of MPS with DPS and EPS

Bank	r	r^2	P.E.	6P.E.	Result
SCBNL	0.7022	0.4930	0.1529	0.9176	Insignificant
NABIL	0.6860	0.4706	0.1597	0.9582	Insignificant
EBL	0.7099	0.5039	0.1496	0.8979	Insignificant
BOK	0.9818	0.9640	0.0109	0.0652	Significant
HBL	0.9775	0.9556	0.0134	0.0804	Significant

(Source: Appendix -VI)

The table shows the multiple correlations among market price per share (MPS) and dividend per share (DPS) and earning per share (EPS) of the sampled banks during the year covered for study. The multiple correlation coefficients (R) between MPS, DPS and EPS of SCBNL, NABIL, EBL, BOK and HBL were 0.7022, 0.6860, 0.7099, 0.9818 and 0.9775 respectively, which shows the positive relationship between these variables of all the sampled banks.

The coefficient of multiple determination (R^2) of BOK is 0.9640, which is highest than that of SCBNL (0.4930), NABIL (0.4706), EBL (0.5039) and HBL (0.9556). It shows that, 49.30%, 47.06%, 50.39%, 96.40% and 95.56% variations in dependent variable (MPS) is explained by the variation in independent variables (EPS and DPS) in SCBNL, NABIL, EBL, BOK and HBL respectively. Further, the higher the value of multiple

correlation coefficient 'R' than the calculated 6 P.E. in BOK and HBL, indicates that there exists significant relationship between the MPS and the joint DPS and EPS. However, in other remaining banks there exists no such bond.

Comparing five sampled banks on the basis of multiple correlation coefficient, it can be concluded that the joint effect of DPS and EPS on MPS is immense in BOK than in other banks, since BOK had highest value of 'R' than other remaining banks.

4.1.7.2 Multiple Regression Test of MPS on DPS and EPS

Let MPS, DPS and EPS be denoted by X_1, X_2 and X_3 respectively. Then the multiple regression equation of MPS on DPS and EPS is given by;

Table 4.11

Multiple Regression Test of MPS on DPS and EPS

Bank	a	b_1	b_2	Equation
SCBNL	1457.91	105.96	-63.21	MPS = 1457.91 + 105.96 DPS – 63.21 EPS
NABIL	1903.14	52.94	-26.93	MPS = 1903.14 + 52.94 DPS -26.93 EPS
EBL	-12541.06	-399.08	386.72	MPS = -12541.06 – 399.08 DPS + 386.72 EPS
BOK	-2389.82	-16.95	91.34	MPS = -2389.82 – 16.95 DPS + 91.34 EPS
HBL	-2507.84	74.80	17.90	MPS = -2507.84 + 74.80 DPS + 17.90 EPS

(Source: Appendix -VI)

The table represents the linear relationship between MPS, with DPS and EPS of sampled banks. In case of SCBNL, the beta coefficient of DPS and EPS is 105.96 and -63.21 respectively. It indicates that a one rupee increase in DPS leads to Rs. 105.96 increase in MPS, if EPS remains constant, and one rupee increase in EPS leads to an average about

Rs. 63.21 decrease in MPS, if DPS remains constant. Similarly, one rupee increase in DPS of NABIL increases Rs. 52.94 increase in MPS, keeping EPS constant, and per rupee increase in EPS increases Rs. 26.93 decrease in MPS, keeping DPS constant.

Likewise, per rupee increase in DPS of EBL yields Rs. 399.08 decrease in MPS, keeping EPS constant, and per rupee increase in EPS leads to Rs. 386.72 increase in MPS, keeping DPS constant. Also, per rupee increase in DPS and EPS of BOK decreases Rs. 16.95 and increases Rs. 91.34 in MPS respectively. Finally, per rupee increase in DPS and EPS of HBL increases Rs. 74.80 and decreases Rs. 17.90 in MPS respectively.

Comparing five sampled banks, it can be concluded that the joint effect of DPS and EPS in MPS was greatest in EBL than in other banks. Further, it has been ascertained that in except in HBL, the effect of these two variables in other banks is not same, i.e. if DPS has positive impact then EPS has negative impact and vice-versa.

4.2 Primary Data Analysis

The primary data analysis has been done by distributing questionnaire containing 5 questions to 10 employees and 10 shareholders of sampled banks. Hence in total, 20 respondents were approached for questionnaire purpose. The employees were approached to the head office of each bank and the shareholders were approached to the NEPSE floor.

4.2.1 Major Motive of Cash Dividend

To know the actual reason for providing cash dividend to the shareholders, the respondents were asked to choose the best answer that suits their motive for distributing cash dividend. The responses achieved are summarized in the following table 4.12.

Table 4.12

Major Motive of Cash Dividend

Motive	**Employees**		**Investors**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**
To convey information that the company is doing well.	2	20	3	30	5	25
To draw attention from the investment community.	2	20	4	40	6	30
To increase the market value of the firm's stock	0	0	2	20	2	10
To fulfill shareholder's expectation.	6	60	1	10	7	35
Total	**10**	**100**	**10**	**100**	**20**	**100**

(Source: Opinion Survey, 2012)

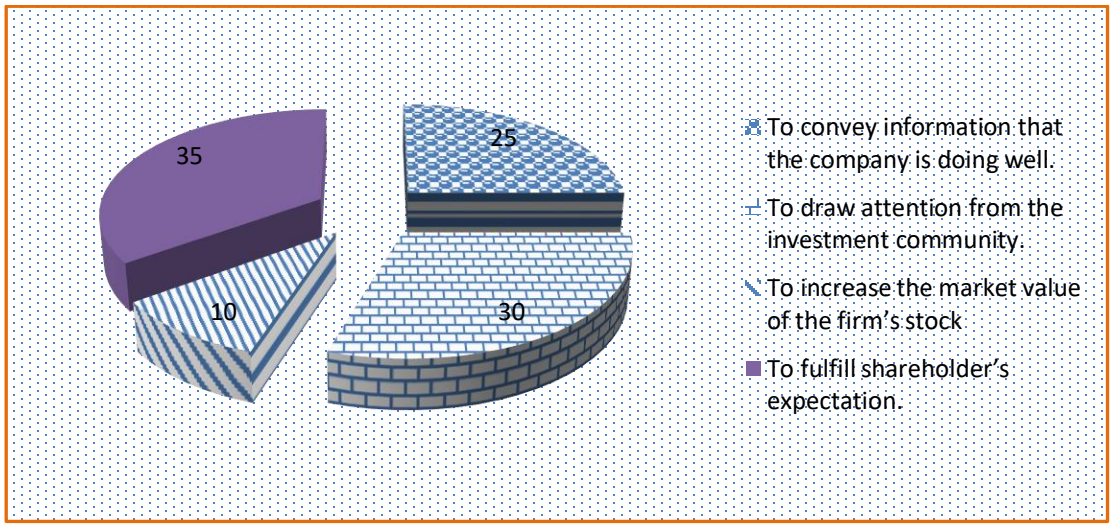
The above table shows that 35% of the respondents stated that the major motive of paying cash dividend is to fulfill the shareholder's expectation. Similarly, 25% of the respondents said that to convey information to the shareholders that the bank is doing well is the major motive for paying cash dividend. Also, 30% respondents said that to draw attention from investment community are the major motive to pay cash dividend. Finally, 10% of the total respondents have stated that to increase the market value of stock is the major motive for bank for dividend payment.

Likewise, 20% of the personnel of the banks and 30% of the investors responded that the company pays cash dividend to convey information to share holders that the company is doing well. 20% of the employees and 40% of the investors said that in order to draw attention from investment community, cash dividend is paid. Similarly, 20% of respondents of investors also replied that cash dividend is paid to increase the market value of the firm's stock. And remaining 60% and 10% of respondents of employees and investors respectively said that cash dividend is paid to fulfill shareholders' expectations. But, none gave any reasons other than mentioned above behind paying cash dividend.

Hence gazing the overall majority, it can be concluded that the major motive of paying cash dividend is to fulfill the shareholder's expectation.

Figure 4.4

Major Motive of Cash Dividend



4.2.2 Dividend Practice Followed

The respondents were asked to state the types of dividend practices that are followed by the banks in Nepal. The responses obtained from them are presented in table 4.13.

Table 4.13

Dividend Practice Followed

Practice	**Employees**		**Investors**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Payment of dividend after financing in all investment opportunities.	3	30	6	60	9	45
Paying regular dividend	5	50	3	30	8	40
Both of above	2	20	1	10	3	15
None of above	0	0	0	0	0	0
Total	**10**	**100**	**10**	**100**	**20**	**100**

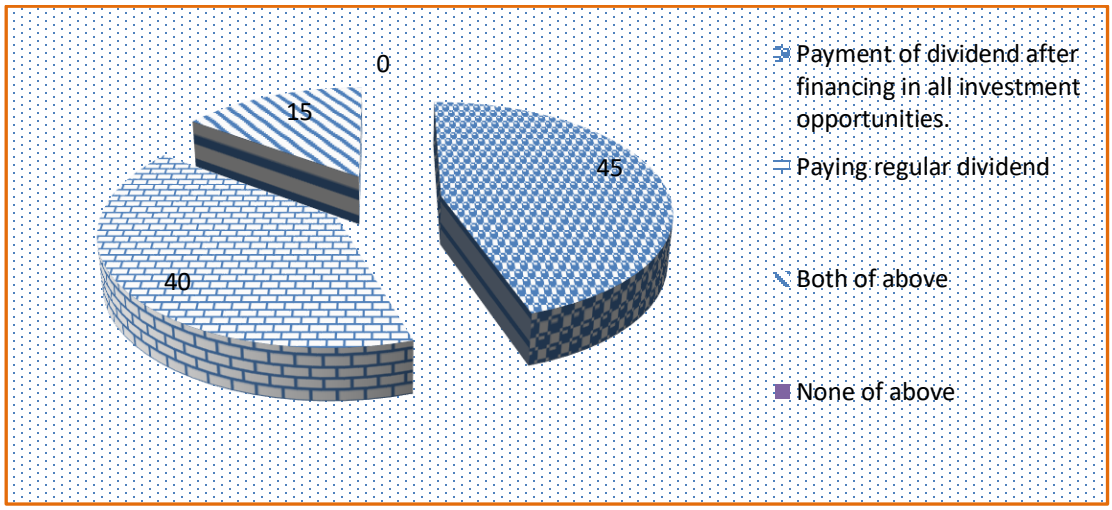
(Source: Opinion Survey, 2012)

The above table clearly depicts that the majority of the respondents (45%) strongly opined that the bank should pay dividend after financing all investment opportunities, while 40% of the respondents said that the bank should pay regular dividend and 15% of the respondents said that the bank should follow both the aforementioned practice.

Likewise, 30% of the employees and 60% of the investors said dividend should be residual decision. But, 50% of the employees and 30% of the investors replied the banks followed regular dividend practice. None of the investors and shareholders is against any kind of dividend. However, 20% of the investors and 10% of the employees explicit that the bank should followed both residual and regular dividend. Hence, considering the overall majority, it can be concluded that the bank should follow the practice of declaring dividend after financing all the investment opportunities.

Figure 4.5

Dividend Practice Followed



4.2.3 Impact of Dividend on Liquidity

To know the degree of agreement on the impact of dividend on liquidity position of the firm, the respondents were asked on this regard. The answers obtained from them are presented in table 4.14.

Table 4.14

Impact of Dividend on Liquidity

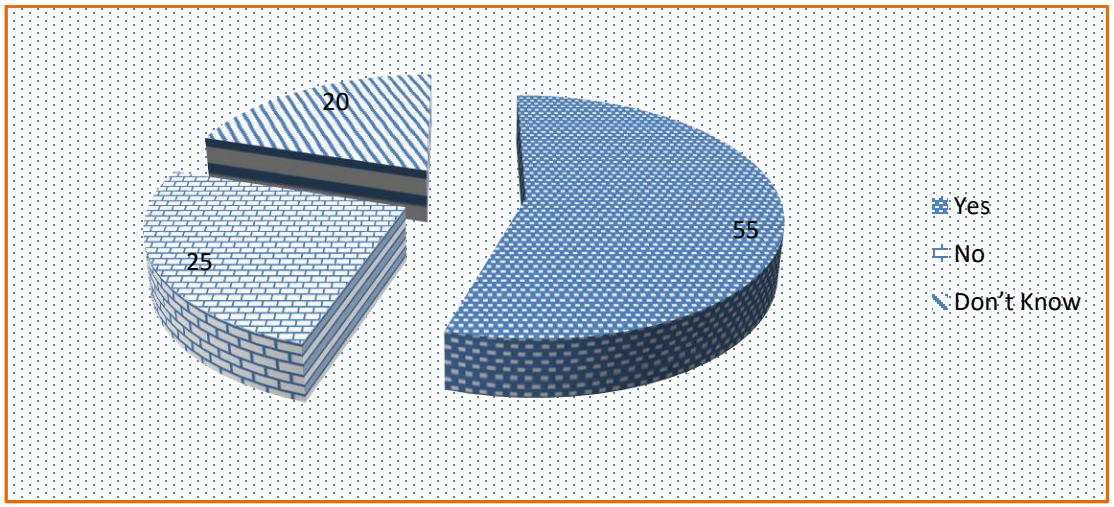
Impact	Employees		Investors		Total	
	No.	%	No.	%	No.	%
Yes	6	60	5	50	11	55
No	3	30	2	20	5	25
Don't Know	1	10	3	30	4	20
Total	**10**	**100**	**10**	**100**	**20**	**100**

(Source: Opinion Survey, 2012)

The above table reflects that 55% of the total respondents opined that dividend has impact on the liquidity position, 25% of the total respondents stated that dividend has no impact and 20% remained neutral. Similarly, 60% of banks' employees and 50% of the investors are in the view that dividend distribution influences the liquidity position. 30% of the banks' employees and 20% of the investors do not think so and 10% respondents of the employees and 30% of the investors did not expressed any idea.

Figure 4.6

Impact of Dividend on Liquidity



4.2.4 Suggestion for Dividend Policy in Nepal

The respondents were also asked to suggest with regard to the dividend policy in Nepalese enterprises. The valuable suggestions achieved from them are inserted in the table 4.15.

Table 4.15

Suggestion for Dividend Policy in Nepal

Suggestion	**Employees**		**Investors**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Treatment of dividend as an obligation	4	40	3	30	7	35
Stability of dividend and unhaphazard payout ratio	2	20	1	10	3	15
Cash balance for dividend be adequately planned and maintained	4	40	6	60	10	50
Total	**10**	**100**	**10**	**100**	**20**	**100**

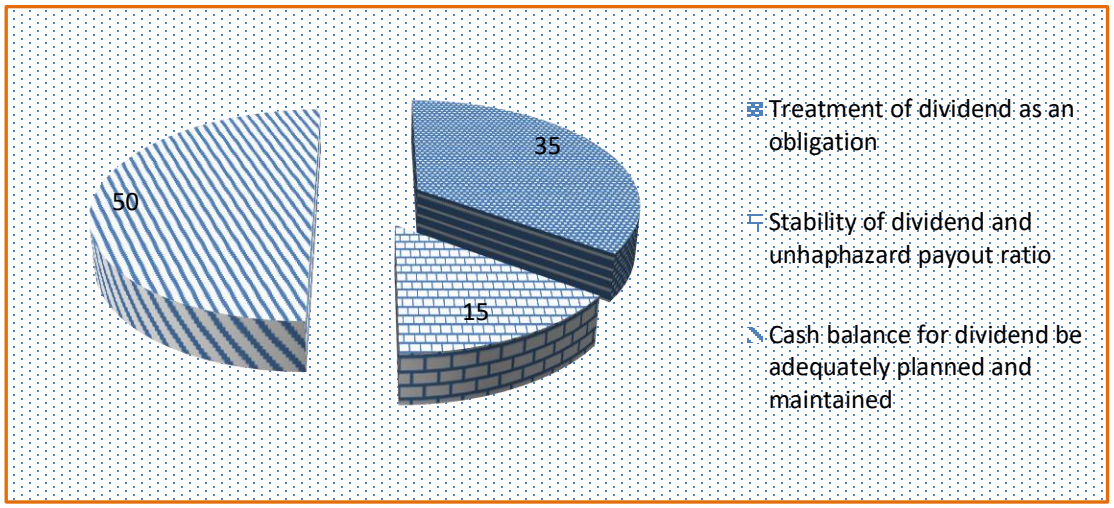
(Source: Opinion Survey, 2012)

From the above table it is clear that 40% of the employees and 30% of the investors suggested that treatment of dividend as an obligation should be dividend policy in Nepalese enterprises. Similarly, 20% of the investors and 10% of the employees suggested stability of dividend and unhaphazard payout ratio with regards to dividend policy in Nepalese enterprises. And 60% of the shareholders and 40% of the employees recommended that cash balance for dividend should be adequately planned and maintained. But, no respondents replied other specific policies.

Likewise, 35% of the overall respondents suggested that treatment of dividend as an obligation, 15% of the respondents suggested that stability of dividend and unhaphazard payout ratio, and 50% adequate cash balance planning should be the dividend policy in Nepal.

Figure 4.7

Suggestion for Dividend Policy in Nepal



4.2.5 Reasons to investment in Share Capital

Large number of people is driving to invest in share capital. So to know the actual causes that provoke them to invest, the respondents were requested to give the main reasons that attract the investors in share capital.

Table 4.16

Reasons to Invest in Share Capital

Reasons	**Employees**		**Investors**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**
To utilize the surplus	2	20	4	40	6	30
This is the best method of investment	2	20	3	30	5	25
To receive dividend	4	40	3	30	7	35
To get voting right	2	20	0	0	2	10
Total	**10**	**100**	**10**	**100**	**20**	**100**

(Source: Opinion Survey, 2012)

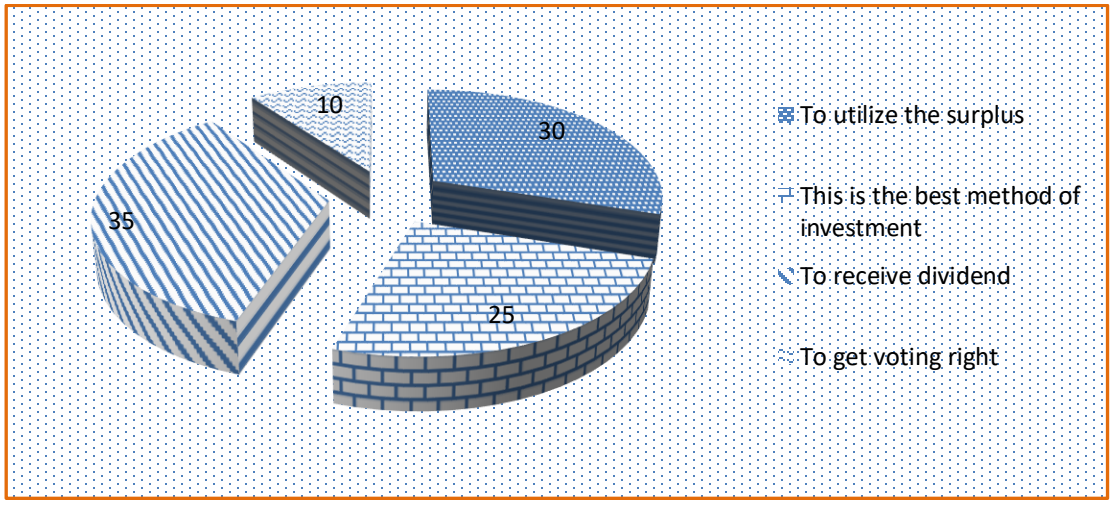
From the above table it has been revealed that 20% of the investors and 40% of the employees replied that people invest in share capital to utilize surplus. Likewise, 20% of

the investors and 30% of the employees considered the investment in share capital is the best method. Similarly, 40% of the employees and 30% of the investors have insisted that people invest in share capital in order to get dividend. In addition, 20% of the employees said that the reason for investment in share capital is to get voting rights.

In overall, 30% of the total respondents (6 out of 20), 25% of the respondents (5 out of 20), 35% of the respondents (7 out of 20) and 10% of the respondents (2 out of 20) said that to utilize the surplus, just due to the best method of investment, to receive dividend, and to get voting right respectively are the main reasons behind investing in share capital. Hence, it can be concluded that after dividend expectation, to utilize surplus is the main reason behind investment in share capital.

Figure 4.8

Reasons to Invest in Share Capital



4.2 Major Findings of the Study

On the basis of the analysis of data, the following major findings have been found.

Findings from Secondary Data Analysis

- SCBNL has distributed highest DPS than other banks. The average distribution of dividend in the five year periods of SCBNL, NABIL, EBL, BOK and HBL is Rs. 114, Rs. 96, Rs. 47, Rs. 37.50 and Rs. 40.08 respectively.
- The DPR ratio shows that the dividend policy scheme of SCBNL is far better than that of other sampled banks. Moreover, the consistency in dividend payout ratio of SCBNL (8.85%) is highest. In average, SCBNL provided 87.38%, NABIL has provided 85.78%, EBL has provided 53.04%, BOK has provided 76.48% and HBL has provided 76.59% of the total earnings of the respective banks.
- The dividend yield ratio shows that the investors of EBL have engaged in more costly stock investment to acquire the share. The dividend yield of SCBNL is 46.37 times, NABIL is 41.37 times, EBL is 49.33 times, BOK is 41.76 times, and HBL is 36.30 times.
- Except in HBL, the correlation test between the MPS and DPS of other banks is statistically insignificant, indicating that the DPS is not the sole determinant of MPS. Moreover, the impact of DPS on the MPS is highest in HBL.
- Further, it has been ascertained that except in HBL, the correlation test between DPS and DY in other banks is statistically insignificant. And finally, it has been found that the DPR has insignificant relation with the MPS, signaling that the MPS is also affected by other variables besides DPR.
- In addition, it has been found that the joint effect of DPS and EPS on MPS is statistically significant in HBL and BOK only. Moreover, in these two banks, the joint effect is greater in BOK.

Findings from Primary Data Analysis

- 35% of the respondents said that the major motive behind distributing the dividend is to fulfill the shareholder's expectation. Also, 45% of the respondents stated that

the bank should follow the practice of paying dividend only after financing all the investment opportunities.

- 55% of the respondents said that dividend payment has greater impact on the liquidity position of the bank.
- 50% of the respondents suggested that adequate cash balance planning should be the dividend policy in Nepal. Finally, 35% of the respondents said that the investors invest in share capital to receive dividend.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Dividend policy decision is undoubtedly one of the major decisions of financial management. It is right to say that dividend policy decision affects the operation and prosperity of a financial bank because it has the power to influence other two decisions namely capital structure decision and investment decision. Basically an investor expects two types of return namely, capital gain and dividend, by investing in equity capital or ordinary share. So, payment of dividend to shareholders is an effective way to attract new investors and maintain present investors to invest in shares. So, it is justified to hold that a clearly defined and effectively managed dividend policy is required in all financial banks to fulfill the shareholders expectations with that of corporate growth from internally generated funds. So, the funds that could not be used due to lack of investment opportunities would be better to be distributed as dividend, since shareholders have investment opportunities elsewhere.

In many cases, banks choose to explicitly state the provisions within the dividend policy. This is definitely to the advantage of the shareholder, as a well defined policy makes it much easier to project the amount of payout profits generated for the period under consideration and thus be able to determine the size of the dividends that will be issued. When the dividend policy is well defined and documented, it is easy for the shareholder to obtain a written copy and thus be fully informed as to how the policy works. However, there are cases where the dividend policy is not so well documented. When this is the case, investors sometimes base their assumptions on upcoming dividend payments on what has occurred in the past. While less systematic, it is still possible to project a more or less accurate estimate of what the dividend payout will actually be.

In cases where the dividend policy is not specifically defined, investors often look at the history to spot any trends that emerged in the past. If the dividend payments have been more or less constant for the last several years, and there has been no loss in business volume, it is reasonable to assume the payments will still be in the same general range as before. However, if the dividend history is more volatile, the shareholder may attempt to identify what factors led to the up and down movement of the dividends and determine if any of those factors are relevant to the current dividend period. In both expressed and implied dividend policy procedures, it is less common for the dividends to be increased. Part of the reason for that is banks tend to look closely at retained earnings and want to make sure the increased level of earnings will be sustained over the long term. Once this upward trend is deemed to be more or less permanent, the bank may choose to increase dividends. Far more common is the practice of reducing dividends. This usually takes place because there is a decrease in the bank's business volume that is not anticipated to be recaptured in the foreseeable future. At other times, the decrease may be due to the need to retain more cash on hand for capital expenses. In both these scenarios, banks tend to notify the shareholders in advance that these factors exist and a chance in dividends will take place in order to meet the challenge to remain profitable.

The study, however, considering these realities assumes that the investors makes assumption on the likely payment rate of dividend before making investment, on the basis of the past trend. The study also measures the impact of dividend policy on the market price per share of the banks. The study rather focuses on the dividend payment policy of the commercial banks, more specifically on five commercial banks; namely SCBNL, NABIL, EBL, BOK and HBL.

5.2 Conclusion

Excerpting the analysis of the study, it can be concluded that the commercial bank lacks sound dividend policy and retention policy, since the dividend distribution practice of all the observed commercial banks has been found to be irregular. Nonetheless, among the

five commercial banks, the dividend distribution pattern of SCBNL is most enticing, since the dividend payout ratio and dividend amount of SCBNL is highest in comparison to that of other banks. Moreover alike DPS, the MPS of most commercial banks has decreased in the last two fiscal years, which enlightens that the MPS might have been affected by DPS of the bank. Besides these, the investors of EBL have engaged in more costly stock investment to acquire the share.

The statistical analysis clarifies that increase in DPS does not always guarantees increase in MPS, because DPS has insignificant relationship with MPS in four observed banks. Moreover, the impact of DPR on MPS is also low in aggregate, as DPS has insignificant relationship with MPS in four banks. Moreover, the joint effect of DPS and EPS is not sufficient to change the MPS in most of the banks, except in HBL and BOK. Eventually, it can be concluded that the fluctuation in MPS is not limited to the single determinant; rather it has been affected by the various internal financial indicators and macroeconomic indicators like inflation, GDP growth, per capita income and others.

From the findings of the study of primary data, it can be concluded that the bank should consider mainly the liquidity status while declaring dividend and pay cash dividend to fulfill shareholder's expectation. Also, dividend distribution influences the liquidity position of the firm. With regard to dividend policy; cash balance for dividend should be adequately planned and maintained. Eventually, most of the people invest in share capital in order to receive the dividend.

5.3 Recommendations

The following recommendations have been provided for the enhancement of the relationship between the banks and their investors, and the enhancement of banking credibility:

- The investors are making costly investment to acquire the share of the observed banks. The investors are thus advised not to concentrate in banking sector only for

share investment. They should in other non-financial sector also, if the probability of earning is satisfactory.

- The dividend payment amount and the dividend payout ratio are not the only fundamental aspects that affect the market price, as evidenced by the correlation and regression test. Thus, the investors are advised to consider all the situations, both internal and externals factors, for making wise investment.
- The bank should not cut a investment by paying dividends. Otherwise dividends cannot be maintained. It must not reduce its dividend as this may imply there are cash flow problems. A bank should try to pay dividends but at the same time maintain sufficient retained earnings to avoid having to raise new finance.
- A bank must never allow the distribution of high dividend to be funded by borrowing money and worsening its debt-equity ratio. Moreover, the bank should set a target dividend payout ratio which is constructive but which also depends on the stability and prospects of the business.
- There has been sharp reduction in the dividend payment amount and dividend payout ratio by most of the observed banks, such awful reduction, though inevitable, for strengthening the equity capital and facing the global recession can create panic in investors and may divert the investors in other lucrative sectors. Thus it is recommended that the banks should make gradual reduction, if necessary, in dividend amount.

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APPENDIX - I

QUESTIONNAIRE

Dear Sir/Madam,

This is to bring your kind information that this is an attempt to identify the *Dynamics of Dividend Policy of Commercial Banks* for the requirement of Masters' Degree, Tribhuvan University. You are kindly requested to fill up the following questionnaire with the best answer in your view. I would be grateful to you for the contribution of your valuable time and effort.

Respondents:

Name : …….. Sex: M [ ] F [ ]

Bank: ……. Position (Optional): ……

Please tick the best answers.

1. What is the major motive of cash dividend in your bank?

a) To convey information to shareholders that the company is doing well.
b) To draw attention from the investment community.
c) To increase the market value of the firm's stock.
d) To fulfill shareholders' expectation.

2. What are the dividend practices being followed by the banks in Nepal?

a) Payment of dividend after financing in all investment opportunities.

b) Paying regular dividend

c) Both of above

d) None of above

3. Payment of dividend has impact on the liquidity position of the firm. Do you agree?

a) Yes b) No c) Don't know

4. Why do people invest in share capital?

a) To utilize the surplus money
b) This is the best method of investment.
c) To receive dividend
d) To get voting rights.

5. Which of the following would be suitable with regard to dividend policy in Nepalese enterprises?

a) Treatment of dividend as an obligation
b) Stability of dividend and unhaphazard pay out ratio.
c) Cash balance for dividend be adequately planned and maintained.

Thank You.

APPENDIX - II

Calculation of Major Financial Ratios

SCBNL

FY	DPS	EPS	DPR	MPS	DPS	DY
2005/06	140	175.84	79.62	3775	140	26.96
2006/07	130	167.37	77.67	5900	130	45.38
2007/08	130	131.92	98.54	6830	130	52.54
2008/09	100	109.99	90.92	6010	100	60.10
2009/10	70	77.65	90.15	3279	70	46.84
Mean			**87.38**			**46.37**
S.D.			**7.74**			**10.99**
C.V.%			**8.85**			**23.71**

NABIL

FY	DPS	EPS	DPR	MPS	DPS	DY
2005/06	85	129.21	65.78	2240	85	26.35
2006/07	140	137.08	102.13	5050	140	36.07
2007/08	100	108.31	92.33	5275	100	52.75
2008/09	85	106.76	79.62	4899	85	57.64
2009/10	70	78.61	89.05	2384	70	34.06
Mean			**85.78**			**41.37**
S.D.			**12.32**			**11.84**
C.V.%			**14.36**			**28.62**

EBL

FY	DPS	EPS	DPR	MPS	DPS	DY
2005/06	25	62.78	39.82	1379	25	55.16
2006/07	40	78.42	51.01	2430	40	60.75
2007/08	50	91.82	54.45	3132	50	62.64
2008/09	60	99.99	60.01	2455	60	40.92
2009/10	60	100.16	59.90	1630	60	27.17
Mean			**53.04**			**49.33**
S.D.			**7.44**			**13.44**
C.V.%			**14.02**			**27.25**

BOK

FY	DPS	EPS	DPR	MPS	DPS	DY
2005/06	48	43.67	109.92	850	48	17.71
2006/07	20	43.5	45.98	1375	20	68.75
2007/08	42.11	59.94	70.25	2350	42.11	55.81
2008/09	47.37	54.68	86.63	1825	47.37	38.53
2009/10	30	43.08	69.64	840	30	28.00
Mean			**76.48**			**41.76**
S.D.			**21.15**			**18.46**
C.V.%			**27.66**			**44.21**

HBL

FY	DPS	EPS	DPR	MPS	DPS	DY
2005/06	35	59.24	59.08	1100	35	31.43
2006/07	40	60.66	65.94	1740	40	43.50
2007/08	45	62.74	71.72	1980	45	44.00
2008/09	43.56	61.9	70.37	1760	43.56	40.40
2009/10	36.84	31.8	115.85	816	36.84	22.15
Mean			**76.59**			**36.30**
S.D.			**20.12**			**8.39**
C.V.%			**26.27**			**23.11**

APPENDIX - III

a) Calculation of correlation coefficient and regression line between DPS & MPS of SCBNL

Year	DPS X	MPS Y	$x = X-\bar{X}$	$y = Y-\bar{Y}$	x^2	y^2	xy
2005/06	140	3775	26.00	-1383.80	676	1914902.44	-35978.80
2006/07	130	5900	16.00	741.20	256	549377.44	11859.20
2007/08	130	6830	16.00	1671.20	256	2792909.44	26739.20
2008/09	100	6010	-14.00	851.20	196	724541.44	-11916.80
2009/10	70	3279	-44.00	-1879.80	1936	3533648.04	82711.20
Total	**570**	**25794**			**3320**	**9515378.80**	**73414**

i) Calculation of Mean

For DPS $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 =$ 114.00 $\bar{Y} = \sum Y/5 =$ 5158.80

ii) Calculation of Correlation Coefficient between DPS and MPS

$$r_{xy} = \frac{\sum}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{73414}{177738.73} = 0.4130$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \frac{}{\sum x^2} = \frac{}{3320}$$

For MPS $\bar{}$

$$б_y = \frac{}{\sum y^2} = \frac{}{9515378.80}$$

N 5 N 5

$\bar{=}$

25.77 $\bar{=}$ 1379.52

iv) Simple Regression Equation of MPS on DPS

$$Y-\bar{Y} = r \times \frac{\sigma_y}{\sigma_x}(X-\bar{X})$$

$\bar{=}$

or, $Y-5158.80 = \frac{0.4130 \times 1379.52 (X-114)}{25.77}$

$\bar{=}$

or, $Y-5158.80 = 22.11 X - 2520.84$

or, $Y = 2637.96 + 22.11 X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.1706	0.83	0.56	2.2361	0.2502	1.5011

b) Calculation of correlation coefficient and regression line between DPS & MPS of NABIL

Year	DPS X	MPS Y	$x = X-\bar{X}$	$y = Y-\bar{Y}$	x^2	y^2	xy
2005/06	85	2240	-11.00	-1729.60	121	2991516.16	19025.60
2006/07	140	5050	44.00	1080.40	1936	1167264.16	47537.60
2007/08	100	5275	4.00	1305.40	16	1704069.16	5221.60
2008/09	85	4899	-11.00	929.40	121	863784.36	-10223.40
2009/10	70	2384	-26.00	-1585.60	676	2514127.36	41225.60
Total	**480**	**19848**			**2870**	**9240761.20**	**102787**

i) Calculation of Mean

	For DPS			For MPS		
Mean	$\bar{X} = \sum X/5$	=	96.00	$\bar{Y} = \sum Y/5$	=	3969.60

ii) Calculation of Correlation Coefficient between DPS and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{102787}{162852.65} = 0.6312$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2870}{5}} = 23.96$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{9240761.20}{5}} = 1359.47$$

iv) Simple Regression Equation of MPS on DPS

$$Y - \bar{Y} = \frac{r \times б_y}{б_x}(X - \bar{X})$$

or, $Y - 3969.60 = \frac{0.6312 \times 1359.47}{23.96}(X - 96)$

or, $Y - 3969.60 = 35.81X - 3438.17$

or, $Y = 531.43 + 35.81X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\,(1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.3984	0.60	0.41	2.2361	0.1815	1.0889

c) Calculation of correlation coefficient and regression line between DPS & MPS of EBL

Year	DPS X	MPS Y	$x = X-\bar{X}$	$y = Y-\bar{Y}$	x^2	y^2	xy
2005/06	25	1379	-22.00	-826.20	484	682606.44	18176.40
2006/07	40	2430	-7.00	224.80	49	50535.04	-1573.60
2007/08	50	3132	3.00	926.80	9	858958.24	2780.40
2008/09	60	2455	13.00	249.80	169	62400.04	3247.40
2009/10	60	1630	13.00	-575.20	169	330855.04	-7477.60
Total	**235**	**11026**			**880**	**1985354.80**	**15153**

i) Calculation of Mean

For DPS $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 47.00$ $\bar{Y} = \sum Y/5 = 2205.20$

ii) Calculation of Correlation Coefficient between DPS and MPS

$$r_{xy} = \frac{\sum}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{15153}{41798.47} = 0.3625$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{880}{5}} = 13.27$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{198535}{5}} = 630.14$$

iv) Simple Regression Equation of MPS on DPS

$$Y - \bar{Y} = \frac{r \times б_y}{б_x}(X - \bar{X})$$

or, $Y - 2205.20 = \frac{0.3625 \times 630.14 (X-47)}{13.27}$

or, $Y - 2205.20 = 17.22 X - 809.31$

or, $Y = 1395.89 + 17.22 X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745 (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.1314	0.87	0.59	2.2361	0.2620	1.5720

d) Calculation of correlation coefficient and regression line between DPS & MPS of BOK

Year	**DPS X**	**MPS Y**	**$x = X - \bar{X}$**	**$y = Y - \bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	48	850	10.50	-598.00	110	357604.00	-6281.39
2006/07	20	1375	-17.50	-73.00	306	5329.00	1277.21
2007/08	42.11	2350	4.61	902.00	21	813604.00	4161.83
2008/09	47.37	1825	9.87	377.00	97	142129.00	3722.50

2009/10	30	840	-7.50	-608.00	56	36966 4.00	4557.57
Total	**187.48**	**7240**			**591**	**16883 30.00**	**7437.71**

i) Calculation of Mean

For DPS $\bar{X} = \sum X/5 = 37.50$ For MPS $\bar{Y} = \sum Y/5 = 1448.0 0$

ii) Calculation of Correlation Coefficient between DPS and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{7437.71}{31599.21} = 0.2354$$

iii) Calculation of Standard Deviation (б)

For DPS $б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{591}{5}} = 10.88$

For MPS $б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1688330.00}{5}} = 581.09$

iv) Simple Regression Equation of MPS on DPS

$$Y - \bar{Y} = \frac{r \times б_y}{б_x}(X - \bar{X})$$

or, $Y - 1448 = \frac{0.2354 \times 581.09}{10.88}(X - 37.50)$

or, $Y - 1448 = 12.58X - 471.55$

or, Y = 976.45 + 12.58 X

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.0554	0.94	0.64	2.2361	0.2849	1.7096

e) Calculation of correlation coefficient and regression line between DPS & MPS of HBL

Year	**DPS X**	**MPS Y**	**$x = X-\bar{X}$**	**$y = Y-\bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	35	1100	-5.08	-379.20	26	143792.64	1926.34
2006/07	40	1740	-0.08	260.80	0	68016.64	-20.86
2007/08	45	1980	4.92	500.80	24	250800.64	2463.94
2008/09	43.56	1760	3.48	280.80	12	78848.64	977.18
2009/10	36.84	816	-3.24	-663.20	10	439834.24	2148.77
Total	**200.4**	**7396**			**73**	**981292.80**	**7495.36**

i) Calculation of Mean

For DPS $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 40.08$ $\bar{Y} = \sum Y/5 = 1479.20$

ii) Calculation of Correlation Coefficient between DPS and MPS

$$r = \frac{\sum xy}{\text{——}} = \frac{7495.36}{\text{——}} = 0.8879$$

$\sqrt{\sum x^2}\sqrt{\sum y^2}$ 8442.07

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{73}{5}} = 3.81$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{981292.80}{5}} = 443.01$$

iv) Simple Regression Equation of MPS on DPS

$$Y-\bar{Y} = \frac{r \times б_y}{б_x}(X-\bar{X})$$

or, $Y-1479.20 = \frac{0.8879 \times 443.01 (X-40.08)}{3.81}$

or, $Y-1479.20 = 103.20 X - 4136.38$

or, $Y = 2657.18 + 103.20 X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745 (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.7883	0.21	0.14	2.2361	0.0639	0.3832

b) Calculation of correlation coefficient and regression line between DPS & DY of NABIL

Year	**DPS X**	**DY Y**	**$x = X-\bar{X}$**	**$y = Y-\bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	85	26.35	-11.00	-15.02	121	225.72	165.26
2006/07	140	36.07	44.00	-5.30	1936	28.13	-233.38

2007/08	100	52.75	4.00	11.38	16	129.41	45.50
2008/09	85	57.64	-11.00	16.27	121	264.58	-178.93
2009/10	70	34.06	-26.00	-7.31	676	53.49	190.16
Total	**480**	**207**			**2870**	**701.34**	**-11.37**

i) Calculation of Mean

For DPS $\bar{X}$ For DY $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 96.00$ $\bar{Y} = \sum Y/5 = 41.37$

ii) Calculation of Correlation Coefficient between DPS and DY

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{-11.37}{1418.75} = -0.0080$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2870}{5}} = 23.96$$

For DY

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{701.34}{5}} = 11.84$$

iv) Simple Regression Equation of DY on DPS

$$Y-\bar{Y} = r \times \frac{б_y}{б_x}(X-\bar{X})$$

or, $Y-41.37 = \underline{0.0080 \times 11.84 (X-96)}$

23.96

$\bar{Y}$ = $\bar{X}$

or, Y-41.37 = 0.004 X + 0.38

or, Y = 41.75 - 0.004 X

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.0001	1.00	0.67	2.2361	0.3016	1.8098

c) Calculation of correlation coefficient and regression line between DPS & DY of EBL

Year	**DPS X**	**DY Y**	**$x = X-\bar{X}$**	**$y = Y-\bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	25	55.16	-22.00	5.83	484	34.01	-128.30
2006/07	40	60.75	-7.00	11.42	49	130.46	-79.95
2007/08	50	62.64	3.00	13.31	9	177.21	39.94
2008/09	60	40.92	13.00	-8.41	169	70.69	-109.30
2009/10	60	27.17	13.00	-22.16	169	490.98	-288.05
Total	**235**	**247**			**880**	**903.36**	**-565.68**

i) Calculation of Mean

For DPS $\bar{X}$ For DY $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 47.00$ $\bar{Y} = \sum Y/5 = 49.33$

ii)
Calculation

of
Correlation
Coefficient
between
DPS and
DY

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{-565.68}{891.60} = -0.6345$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{880}{5}} = 13.27$$

For DY

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{903.36}{5}} = 13.44$$

iv) Simple Regression Equation of DY on DPS

$$Y - \bar{Y} = r \times \frac{б_y}{б_x}(X - \bar{X})$$

or, $Y - 49.33 = \frac{0.6345 \times 13.44}{13.27}(X - 47)$

or, $Y - 49.33 = 0.64\ X + 30.21$

or, $Y = 79.54 - 0.64\ X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.4025	0.60	0.40	2.2361	0.1802	1.0813

d) Calculation of correlation coefficient and regression line between DPS & DY of BOK

Year	DPS X	DY Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
2005/06	48	17.71	10.50	-24.05	110	578.40	-252.62
2006/07	20	68.75	-17.50	26.99	306	728.46	-472.22
2007/08	42.11	55.81	4.61	14.05	21	197.40	64.83
2008/09	47.37	38.53	9.87	-3.23	97	10.43	-31.89
2009/10	30	28	-7.50	-13.76	56	189.34	103.14
Total	**187.48**	**209**			**591**	**1704.04**	**-588.7596**

i) Calculation of Mean

For DPS $\bar{X}$ For DY $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 37.50$ $\bar{Y} = \sum Y/5 = 41.76$

ii) Calculation of Correlation Coefficient between DPS and DY

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{-588.7596}{1003.89} = -0.5865$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{591}{5}} = 10.88$$

For DY

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1704.04}{5}} = 18.46$$

iv) Simple Regression Equation of DY on DPS

$$Y - \bar{Y} = r \times \frac{\sigma_y}{\sigma_x}(X - \bar{X})$$

or, $Y - 41.76 = \frac{0.5865 \times 18.46 (X - 37.50)}{10.88}$

or, $Y - 41.76 = 12.58\ X + 37.33$

or, $Y = 79.09 - 1.00\ X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.3440	0.66	0.44	2.2361	0.1979	1.1874

e) Calculation of correlation coefficient and regression line between DPS & DY of HBL

Year	**DPS X**	**DY Y**	**$x = X - \bar{X}$**	**$y = Y - \bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	35	31.43	-5.08	-4.87	26	23.68	24.72
2006/07	40	43.5	-0.08	7.20	0	51.90	-0.58
2007/08	45	44	4.92	7.70	24	59.35	37.90
2008/09	43.56	40.4	3.48	4.10	12	16.84	14.28
2009/10	36.84	22.15	-3.24	-14.15	10	200.11	45.83
Total	**200.4**	**181**			**73**	**351.88**	**122.1616**

i) Calculation of Mean

For DPS $\bar{X}$ For DY $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 40.08$ $\bar{Y} = \sum Y/5 = 36.30$

ii) Calculation of Correlation Coefficient between DPS and DY

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{122.1616}{159.86} = 0.7642$$

iii) Calculation of Standard Deviation (б)

For DPS

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{73}{5}} = 3.81$$

For DY

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{351.88}{5}} = 8.39$$

iv) Simple Regression Equation of DY on DPS

$$Y - \bar{Y} = \frac{r \times б_y}{б_x}(X - \bar{X})$$

or, $Y - 36.30 = \frac{0.7642 \times 8.39 (X - 40.08)}{3.81}$

or, $Y - 36.30 = 1.68 X - 67.42$

or, $Y = 31.12 + 1.68 X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745 (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.5840	0.42	0.28	2.2361	0.1255	0.7530

APPENDIX - V

a) Calculation of correlation coefficient and regression line between DPR & MPS of SCBNL

Year	DPR X	MPS Y	$x = X-\bar{X}$	$y = Y-\bar{Y}$	x^2	y^2	xy
2005/06	79.62	3775	-7.76	-1383.80	60	1914902.44	10738.29
2006/07	77.67	5900	-9.71	741.20	94	549377.44	-7197.05
2007/08	98.54	6830	11.16	1671.20	125	2792909.44	18650.59
2008/09	90.92	6010	3.54	851.20	13	724541.44	3013.25
2009/10	90.15	3279	2.77	-1879.80	8	3533648.04	-5207.05
Total	**436.9**	**25794**			**299**	**9515378.80**	**19998.03**

i) Calculation of Mean

For DPR $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 87.38$ $\bar{Y} = \sum Y/5 = 5158.80$

ii) Calculation of Correlation Coefficient between DPR and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{19998.03}{53361.92} = 0.3748$$

iii) Calculation of Standard Deviation (б)

For DPR

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{299}{5}}$$

For MPS $\bar{Y}$

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{9515378.80}{5}}$$

$\bar{=}$

7.74 $\bar{=}$ 1379.52

iv) Simple Regression Equation of MPS on DPR

$$Y-\bar{Y} = r \times \frac{\sigma_y}{\sigma_x}(X-\bar{X})$$

$$\text{or, } Y-5158.80 = \frac{0.3748 \times 1379.52 (X-87.38)}{7.74}$$

$$\text{or, } Y-5158.80 = 66.83 X - 5839.32$$

$$\text{or, } Y = -680.52 + 66.83 X$$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745 (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.1404	0.86	0.58	2.2361	0.2593	1.5557

b) Calculation of correlation coefficient and regression line between DPR & MPS of NABIL

Year	**DPR X**	**MPS Y**	**$x = X-\bar{X}$**	**$y = Y-\bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	65.78	2240	-20.00	-1729.60	400	2991516.16	34595.46
2006/07	102.13	5050	16.35	1080.40	267	1167264.16	17662.38
2007/08	92.33	5275	6.55	1305.40	43	1704069.16	8547.76
2008/09	79.62	4899	-6.16	929.40	38	863784.36	-5726.96
2009/10	89.05	2384	3.27	-1585.60	11	2514127.36	-5181.74
Total	**428.91**	**19848**			**759**	**9240761.20**	**49896.894**

i) Calculation of Mean

	For DPR			For MPS		
Mean	$\bar{X} = \sum X/5$	=	85.78	$\bar{Y} = \sum Y/5$	=	3969.60

ii) Calculation of Correlation Coefficient between DPR and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{49896.89}{83740.53} = 0.5959$$

iii) Calculation of Standard Deviation (б)

For DPR

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{759}{5}} = 12.32$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{9240761.20}{5}} = 1359.47$$

iv) Simple Regression Equation of MPS on DPR

$$Y - \bar{Y} = \frac{r \times б_y}{б_x}(X - \bar{X})$$

or, $Y - 3969.60 = \frac{0.5959 \times 1359.47 (X - 85.78)}{12.32}$

or, $Y - 3969.60 = 65.75 X - 5640.35$

or, $Y = -1670.75 + 65.75 X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745 (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745 (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.3550	0.64	0.44	2.2361	0.1945	1.1673

c) Calculation of correlation coefficient and regression line between DPR & MPS of EBL

Year	DPR X	MPS Y	$x = X-\bar{X}$	$y = Y-\bar{Y}$	x^2	y^2	xy
2005/06	39.82	1379	-13.22	-826.20	175	682606.44	10920.71
2006/07	51.01	2430	-2.03	224.80	4	50535.04	-455.89
2007/08	54.45	3132	1.41	926.80	2	858958.24	1308.64
2008/09	60.01	2455	6.97	249.80	49	62400.04	1741.61
2009/10	59.9	1630	6.86	-575.20	47	330855.04	-3947.02
Total	**265.19**	**11026**			**277**	**1985354.80**	**9568.042**

i) Calculation of Mean

For DPR $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 =$ 53.04 $\bar{Y} = \sum Y/5 =$ 2205.20

ii) Calculation of Correlation Coefficient between DPR and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{9568.042}{23430.45} = 0.4084$$

iii) Calculation of Standard Deviation (б)

For DPR = For MPS =

$$\sigma_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{277}{5}} = 7.44 \qquad \sigma_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1985354.80}{5}} = 630.14$$

iv) Simple Regression Equation of MPS on DPR

$$Y - \bar{Y} = \frac{r \times \sigma_y}{\sigma_x}(X - \bar{X})$$

$$\text{or, } Y - 2205.20 = \frac{0.4084 \times 630.14}{7.44}(X - 53.04)$$

$$\text{or, } Y - 2205.20 = 34.60\,X - 1835.22$$

$$\text{or, } Y = 369.98 + 34.60\,X$$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\,(1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\,(1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.1668	0.83	0.56	2.2361	0.2513	1.5081

d) Calculation of correlation coefficient and regression line between DPR & MPS of BOK

Year	**DPR X**	**MPS Y**	**$x = X - \bar{X}$**	**$y = Y - \bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	109.92	850	33.44	-598.00	1118	357604.00	-19994.73
2006/07	45.98	1375	-30.50	-73.00	930	5329.00	2226.79
2007/08	70.25	2350	-6.23	902.00	39	813604.00	-5623.07
2008/09	86.63	1825	10.15	377.00	103	142129.00	3825.04
2009/10	69.64	840	-6.84	-608.00	47	369664.00	4161.15
Total	**382.42**	**7240**			**2237**	**1688330**	**-**

						.00	**15404.81**

i) Calculation of Mean

	For DPR			For MPS		
Mean	$\bar{X} = \sum X/5$	=	76.48	$\bar{Y} = \sum Y/5$	=	1448.00

ii) Calculation of Correlation Coefficient between DPR and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{15404.81}{61457.06} = -0.2507$$

iii) Calculation of Standard Deviation (б)

For DPR

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2237}{5}} = 21.15$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1688330.00}{5}} = 581.09$$

iv) Simple Regression Equation of MPS on DPR

$$Y - \bar{Y} = r \times \frac{б_y}{б_x}(X - \bar{X})$$

or, $Y - 1448 = \frac{0.2507 \times 581.09 (X - 76.48)}{21.15}$

or, $Y - 1448 = 6.89X - 471.55$

or, $Y = 1974.67 - 6.89X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.0628	0.94	0.63	2.2361	0.2827	1.6962

e) Calculation of correlation coefficient and regression line between DPR & MPS of HBL

Year	**DPR X**	**MPS Y**	**$x = X-\bar{X}$**	**$y = Y-\bar{Y}$**	**x^2**	**y^2**	**xy**
2005/06	59.08	1100	-17.51	-379.20	307	143792.64	6640.55
2006/07	65.94	1740	-10.65	260.80	113	68016.64	-2778.04
2007/08	71.72	1980	-4.87	500.80	24	250800.64	-2439.90
2008/09	70.37	1760	-6.22	280.80	39	78848.64	-1747.14
2009/10	115.85	816	39.26	-663.20	1541	439834.24	-26035.91
Total	**382.96**	**7396**			**2024**	**981292.80**	**-26360.43**

i) Calculation of Mean

For DPR $\bar{X}$ For MPS $\bar{Y}$

Mean $\bar{X} = \sum X/5 = 76.59$ $\bar{Y} = \sum Y/5 = 1479.20$

ii) Calculation of Correlation Coefficient between DPR and MPS

$$r = \frac{\sum xy}{\sqrt{\sum x^2}\sqrt{\sum y^2}} = \frac{-26360.43}{44563.62} = -0.5915$$

iii) Calculation of Standard Deviation (б)

For DPR

$$б_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{2024}{5}} = 20.12$$

For MPS

$$б_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{981292.80}{5}} = 443.01$$

iv) Simple Regression Equation of MPS on DPR

$$Y - \bar{Y} = r \times \frac{б_y}{б_x}(X - \bar{X})$$

or, $Y - 1479.20 = \frac{0.8879 \times 443.01 (X - 76.59)}{20.12}$

or, $Y - 1479.20 = 13.03\ X + 997.64$

or, $Y = 2476.84 - 13.03\ X$

v) Calculation of Probable Error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{N}}$$

r^2	$1-r^2$	$0.6745\ (1-r^2)$	$\sqrt{N}$	P.E.	6 P.E.
0.3499	0.65	0.44	2.2361	0.1961	1.1766

APPENDIX - VI

Calculation of Multiple Correlation Coefficient and Regression of SCBNL

FY	MPS	DPS	EPS
2005/06	3775	140	175.84
2006/07	5900	130	167.37
2007/08	6830	130	131.92
2008/09	6010	100	109.99
2009/10	3279	70	77.65

SUMMARY OUTPUT (Using Microsofit Excel 2007)

Regression Statistics	
Multiple R	0.7022
R Square	0.4930
Adjusted R Square	-0.0139
Standard Error	1553.0624
Observations	5

ANOVA

	df	*SS*	*MS*	*F*
Regression	2	4691373	2345687	0.972506
Residual	2	4824006	2412003	
Total	4	9515379		

	Coefficients	*S.D.*	*t Stat*	*P-value*
Intercept	1457.91	3319.467	0.439199	0.703413
X Variable 1	105.96	79.08273	1.339902	0.312223
X Variable 2	-63.21	56.04747	-1.12782	0.376504

Multiple Regration Formula

$R_{1.23}=$

$$\sqrt{\frac{r^2_{12}+r^2_{13}-2\,r12\,_r23\,r_{13}}{1-r^2_{23}}}$$

Note: Same Process has been Adopted for finding the multiple correlation and regression of other banks