

# Chapter I

## INTRODUCTION

### 1.1 Introductions and Background

Every firm after making profit either retains the money for further investment or distributes it among the shareholders. The profit made by the firm, which is distributed, to the shareholders is termed as dividend. The firm should decide whether to keep the money as retained earning or pay the dividend. The dividend policy is the policy followed by the firm regarding the dividend versus retention decision.

Dividend policy determines the division of earnings between payments to the shareholders and reinvest in the firm. It fixes what proportion of earnings is paid to shareholders by way of dividends and what proportion is ploughed back in firm for reinvestment purposes. Dividend refers to that portion of firm's earnings, which are paid out to the shareholders. Since dividends are distributed out of the profits, the alternative to the payment of dividends is the retention of profits. Retained earnings are the significant internal source of financing corporate growth. There is inverse relationship between retained earning and cash dividends.

Banking plays significant role in the economic development of a country. Bank is a resource for the economic development, which maintains the self-confidence of various segments of society and extends credit to the people. So commercial banks are those financial institutions mainly dealing with activities of the trade, commerce, industry and agriculture that seek regular financial and other helps from them for growing and flourishing. They furnish necessary capital required for trade and commerce in mobilizing the disperse saving of the individual and institutions. Normally banks play at public money, therefore banks should pay more attention whether their money is properly utilized or not and running at profit or not. If there is not profit a business firm becomes unable to provide its facilities in the long run. These profits which can be distributed among the owners as dividend, which is the main reason where public, are interested to invest their money on the shares of bank or other institutions.

It is not necessary that all business organization follow the same dividend policy. Dividend policy of different organization may be same or different. But the policy followed by the firm should be suitable for both the shareholders as well as the firm itself. The dividend and retained earning

have reciprocal relationship. If the dividend is paid, retained earnings decrease while if the profit is retained, shareholder's wealth is minimized.

Nepal is a developing country with very low per capita income; very small part of the population has spare money whereas a big part is under the line of poverty. Among the small part of population with spare money only few people are interested to invest the money in business due to the fear of not getting back. So the people who invest money in the business expect return from the money they invest. So the most important thing to attract the people to invest in business is dividend. People are encouraged to invest in the business, which pay high amount of dividend. They do not care whether the business is actually running in profit or not. So paying dividend is very important to attract the shareholders who are very important constituent of the business.

But satisfying the shareholders should not only be the firm. Sometimes the firm may get the good investment opportunity in which retained earnings are needed. In such a case, firm should be involved in maximization of company's wealth. So the dividend policy followed by the firm should be able to satisfy the shareholders as well as maximize the company's wealth. The dividend policy also depends upon the objective of the firm. But the policy should be formulated considering the legal aspects of the country. The dividend payment is the major decision of the firm, which affects the running of the business. Once the company decides to pay dividend, they may establish somewhat permanent dividend policy, which may in turn impact on the position of the company in the financial market. What they decide affects the investors and the potential investors.

Banks play the very important role in the economic development of the country. Banks are the financial institutions, which mobilize idle savings of the people in the productive sectors. Banks help to connect the savers and users through the monetary resources. The money is carried from savers to users by banks. The idle savings of the people is transferred to the industries, trades, and commerce. The savers are benefited in the form of interest. At the same time, trade, commerce and industries are also benefited by money for business.

Government permitted the establishment of joint venture banks in 1980's when three banks namely Nepal Grindlays Bank Limited, Nepal Arab Bank Limited and Nepal Indosuez Bank Limited (now Investment Bank Limited) were established. But now Nepal has experienced the dramatic increase in joint venture banks. Banks have attracted people to invest their money by providing various facilities. Many people and organizations are benefited through the

commercial banks through loans provided for housing, vehicles, educations etc. Commercial bank has also attracted customers through their various savings schemes. Last but not the least; people invest in the banks for dividend.

## **1.2. Statement of the problem**

Dividend decision is a very important part of the managerial finance in the sense that the investors may require to rethink about investing in the shares of the company in absence of dividend payment. There is different school of thoughts on dividend policy in the theoretical literature of finance. One schools of thoughts hold that capital gains. Many theories are empirical findings. Dividend policy is still a crucial and probably a most controversial topic in finance. It is more technical area of finance in the sense that it is complex one having numerous implications for the firm.

In the context of Nepalese Commercial banks and public enterprises listed in Nepal Stock Exchange are not seen so serious regarding dividend decision. Since most of them do not have any consistent and clear-cut policy on dividend distribution. There is no limit to the identification of the problem about dividend policy that is visible in Nepalese commercial bank. Even if there is policy that dividend policy of commercial bank is not matching with the earning. Retained earning of the firm is taken as financial source. If the firm retains its earning it will result in decrease in leverage ratio, expending activities and increasing profit in succeeding years. Where as if the firm pays dividend it may need to raise capital through capital market, which reduce ownership controls of the existing shareholders. Another way of raising capital is through debentures, which ultimately affects on risk of the firm. However, dividend is the most important factor for the attraction and motivation of the investors and it also reflects firm's healthy position in the market. There is no limit to the identification of the problems about the dividend policies and the practices that are occurring in the different publicly listed companies. This study focuses on the following problems, which are being affected by the dividend policy makers of any companies.

- (i) In this research, the main problem is whether the selected banks are paying the dividend uniformly or not and whether the expectations of shareholders are fulfilled or not?
- (ii) To find the impact of value of stock on dividend policy is affecting?
- (iii) Do the companies paying larger dividend have a good financial position?

- (iv) What is the relationship of the dividend policy with various financial indicators like earning per share (EPS), dividend per share (DPS), Market price of share (MPS), dividend payout ratio (DPR), net worth and book value per share?
- (v) Does the dividend policy affect the market price of the share differently in different companies?

### **1.3 Focus of the study**

Dividend is the major decision, which affects the value of the firm. So the study is based on the dividend policy of the commercial bank in Nepal. There are eighteen commercial banks in Nepal but it is not possible to cover all the banks for our study. So only five commercial banks are chosen. The study is focused on the dividend policy followed by five chosen banks, which will represent all the commercial banks of Nepal. So we will analyse the financial statements of the chosen banks and find out whether the dividend policy followed by them is relevant or not. In this study, it has tried to find out the appropriate dividend policies of the sample companies and their performances regarding dividend payment. It is believed that this study will be useful to those investors who are interested to have knowledge about the performance of the companies taken under study.

### **1.4 Objective of the study**

This study is undertaken to focus on the current dividend policies being follow by different companies of Nepal. This study also gives direction to the dividend policy makers for the overall healthier growth of the share markets and public companies this study also looks into how such policies could impact share markets. The main objective of the study is to shade light on these aspects.

- (i) To study whether the commercial banks are following the suitable dividend policy or not.
- (ii) The study whether the dividend policy affects the value of firm or not.
- (iii) To compare the dividend policy followed by different commercial banks chosen.
- (iv) To study the relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR, Net worth, net profit and book value of share.
- (v) To provide suggestions to the sample banks chosen regarding their dividend policy, so that they can follow the better policy if the existing policy is not fruitful enough.

## 1.5 Significance of the study

The study will be very helpful since we can know about the dividend policy of the chosen companies which will represent all the commercial banks of Nepal. The study is not only helpful to the researchers but the final outcome of the study will prove to be a valuable tool for the following groups.

- (i) **Shareholders:** - the shareholders will be able to know whether the dividend policy of the company where they invested their money is relevant or not. They will also be able to know the position of the company in the financial market.
- (ii) **Banks:** - The banks will know the dividend practices followed by other banks and will be able to improve their dividend policy.
- (iii) **Finance companies:** - the finance companies will also be able to compare their own dividend practices with those of the banks chosen and find out whether they need to improve their dividend policy.
- (iv) **Students:** - Students will be able to study about dividend policy and will be helpful as they can take it as reference if they are doing the research in the similar topics.
- (v) **Teachers:** - Teachers can use it as a tool in teaching.
- (vi) **Researchers:** - As maintained above, researchers can use it as a reference for their research.

Besides, it will prove to be a very important tool for stockbrokers, policy makers, potential investors, general public and enthusiasts, since it will provide information about dividend policy.

## 1.6 Research Methodology

Research will mostly be based on secondary data. The research will be analytical as well as descriptive in nature. Appropriate financial and statistical tools will be used. All the commercial banks are taken as the population whereas: five banks will be the sample, which are listed as follows: -

- (i) Nepal Investment Bank limited
- (ii) Standard Chartered Bank Limited
- (iii) Nepal SBI Bank Limited
- (iv) Nepal Bangladesh Bank Limited
- (v) Everest Bank Limited.

The various financial and statistical tools will be used in the research. The financial tools are EPS, DPS, DPR, P/E Ratio, Dividend yield, Market value per share etc. and the various statistical tools used are mean, standard deviations, coefficient of variation, coefficient of correlation, regression analysis, T-test, F-test, Standard error estimate, probable error etc.

### **1.7 Limitation of the study**

Dividend is the most important topic in financial management. There are several aspects of decision that should be undertaken by financial manager to achieve the managerial goal. Areas of financial management decision are investment, capital structure, liquidity, leverage, dividend and others. I have concentrated my scope of study on dividend policy to be more specific. The research is for the partial fulfillment of the requirement of masters in business studies programme.

*There are certain limitations which are as follows:-*

- (i) Only secondary data are used which is the limitation of study. Most of the organization refuses to give their primary data. So we have to use only secondary data for our studies.
- (ii) Only high banks are taken as sample for studies because of the time factor.
- (iii) Only banks are chosen for the study although there are other organizations that are involved in distributing the dividend to the shareholders.
- (iv) The data of only five years are taken for the study.
- (v) The name of Indosuez bank limited has been changed to Nepal Investment bank limited and the name of Grindlays bank limited has been changed to Standard Chartered bank limited.

### **1.8 Organization of the study**

The report will be presented in five chapters which are as follows:-

**Chapter 1 Introduction**

**Chapter 2 Review of Literature**

**Chapter 3 Research Methodology**

**Chapter 4 Presentation and analysis of Data**

**Chapter 5 Summary, Conclusions and Recommendation**

The first chapter contains short introduction of the research. The outline of the research is presented in the chapter. The whole research will be based on the introduction chapter.

In the second chapter, various books, journals and other thesis are reviewed so that we can obtain the detail information of the work we are going to do. This chapter will be divided into two headings:-

- (i) Conceptual Framework
- (ii) Review of various studies

In the third chapter, the methods used in the research are described. Various financial and statistical tools are discussed in this chapter.

In the fourth chapter, the collected data are analyzed using various statistical and financial tools this is the main part of the study.

In the last chapter, the conclusion is drawn from the analysis in the previous chapter. Suggestions are given by the writer to the sample companies.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

In this section, various published and unpublished studies regarding dividend policy are reviewed. Most of the books and journals are studied from Shanker Dev Campus Library and T.U. Library. Some studies are taken from web sites. Most of the thesis report related to the subject is reviewed the details of which are mentioned below: -

*This chapter is divided into two parts:-*

- 2.1. Conceptual framework.
- 2.2 Review of various studies.

#### **2.1. Conceptual framework**

##### **2.1.1 Meaning of dividend and dividend policy.**

When the company makes the profit, they must decide what to do with that profit. There are two options for the company, either to pay the dividend to the shareholders or retain the money in order to invest it into more profitable sector. Some company pays all the earnings to the shareholders but some company pay some portion of earning to the shareholders while keep the other portion for further investment.

“What and how much it is desirable to pay dividends is always a controversial topic because shareholders expect higher dividend from corporation but corporations ensure towards setting aside funds for maximizing the overall shareholder’s wealth.” (Shrestha, 1980, p 640).

The portion of money that is paid to the shareholders is called dividend and the policy of the company regarding what to do with the earning and how to pay the dividend is called dividend policy.

“.....By the dividend policy we mean some kind of consistent approach to the distribution versus retention decision, rather than making the decision on the purely adhoc basis from period to period.” (Shrestha, 1980, p 640).



Commercial banking in Nepal commenced in a formal manner in 1937 with the establishment of Nepal Bank Ltd. From that day forward banking in Nepal has taken many strides forward, with a myriad of banks and multitude of financial products entering the market. The entry of joint venture banks in the country opened the doors to international standard banking services and with it heightened customer expectations.

### **2.1.2. Concepts of Dividend**

The various concepts that have inherently gained popularity in modern world of financial management are discussed below: -

(i) **Residual Concepts:** - Dividend is the residue left after meeting all obligations and adjusting for retention of earning and other provisions.

“..... for many small investors dividend prospects represent of principal criterion for or against buying given common stock.” (Raymond, 1967, p 352).

(ii) **Discretionary concept:** - “Dividend payment is one of directors’ decisions and so they use discretions in declaration of dividend. Corporation’s charter vested power 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.” (Shrestha, 1980, p 645).

(iii) **Liability concept:** - Dividend once declared by the board of directors becomes a liability of the corporation. The dividends declared are treated as liabilities in the balance sheet if the shareholders do not come to claim in time.

(iv) **Pro Rata distribution concept:** - A pro rata distribution conveys the meaning that all shares of outstanding stock, or all share of given class, participate equally in whatever is distributed. Thus, all shareholders enjoy equal rights according to their proportionate shareholding on the profits or gains distributed by the corporations.

### **2.1.3. Forms of Dividends**

It is necessary that the companies always pay the dividends in the form of cash. The dividend may be paid in various forms. Some of the common forms of dividend are as follows: -

- (i) **Cash Dividend:** - When the company pays the dividend in the form of cash, this is called cash dividend and this is the most common form of dividend and most preferred by the shareholders. Although cash dividend reduces company taking opportunity of having strong position of liquidity, it is a popular way of fulfilling investor's desire. Beside this if cash dividend has given, company's net worth and total assets also would be reduced.
- “Both total asset and the net worth of the company are reduced when cash dividend is distributed. The market price of the share drops in most cases by the amount of cash dividend distributed.” (Hasting, 1966, p 370).
- (ii) **Stock dividend:** - Some times when there is good investment opportunity for the company and the whole portion of the profits is needed for reinvestment, the company prepares to retain the whole portion of the profit. But in order to satisfy the shareholders the company should also pay the dividend. In such a case, the company decides to pay the dividend in the form of stock. Such dividends is called stock dividend.
- (iii) **Script dividend:** - Sometimes, even if the company has earned the profit, there is scarcity of cash. In such a situation, dividend is paid in the form of promissory notes which is called script dividend. Shareholders are providing with promissory notes with specified date. The promissory notes may be interest bearing or not. This is not as common as cash dividend. But script dividend is very helpful for the company when there is lack of cash in the company.
- (iv) **Bond dividend:** - When the dividend is paid in the form of bond, it is called bond dividend. Bond dividends are always interest bearing.
- (v) **Liquidation dividend:** - When the dividends are paid in the form of assets it is called liquidating dividend. The shareholders are provided with assets other than cash. When the company is in liquidity position, then this sort of dividends is paid.
- (vi) **Stock Split:** - Stock splits is closely related to stock dividend from a practical stand point there is little different between stock dividend and stock split. In a stock split. Total, rupee amount on either side of the balance sheet is not affected but stock split tends to bring changes in the number of shares through a proportionate change in the par value of stock. As for instance, two-for-one stock split implies that each shareholder receives two shares for each one previously held. The objectives of issuing stock split are to prepare the way new offerings of common stock. By means of lowering the price of stock through stock split,

marketability of new issue is considerably improved. Stock splits are usually welcomed by the investors. Along with their enhancement of [probability increase trading activity, they are milestones in the corporations overall growth progress. But in actual practice the stock split does not represent a thing of value to the investors, since the market value of stock gets reduced proportionately so that the total holdings remains the same.

“The stock splits may, however, have informational content. The announcement of split may indicate the investors that management believes that earnings will continue to grow. As a result, the market price per share may increase upon the announcement of the split or the rumor of an announcement and remain higher.” (Johnson, 1966, p. 683.)

Sometimes Corporations undertake reverse split of increasing par value through reduction in shares. As for instance, the corporation may provide one-to-ten split instead of two-to-one split. For each ten shares held, the corporation pays only one share in exchange.

The purpose of reverse split is to enhance the market price of the share. Reverse split is regarded as an admission by a corporation that it is in financial handicap. In the context of our corporations. Agricultural development Bank and Cooperative societies have greatly recognized to us of stock split to encourage subsistence farmers to contribute minor capital of membership. But stock splits if carried too much tend to shake out the corporation's financial reputation by causing a sharp decline in market value of shares.

### **2.1.4 Factors affecting Dividend Policy**

There are various factors that affect dividend policy. Some factors favor high payout ratios whereas some favor low payout ratios. Or, we can interpret that some factors have positive impact on dividend policy and some have negative impact. The various factors affecting dividend policy are as follows:

- 1. Legal Restriction:** - Dividend policy should be formulated within the boundary of some legal rules. Although legal rules are not only the determining factors of the firm's dividend policy, they play the significant role in formulating the dividend policy. There are three basic legal rules which the company should follow:
  - i. The net profit rule:** - According to this rule, dividend should be paid from the net profit of the firm and not more than that. The company should not pay the dividend more than

the sum total of earning of present year and balance of the retained earning of the post year.

“..... Where as National Trading Ltd., is not legally possible to pay dividend due to huge losses in 2032, although it has past accumulated reserves as revealed in Balance Sheet.” (Shrestha, 1980, p.658)

**ii. The capital impairment rule:** -According to this rule the dividend should not be paid form the paid up capital, which cause adverse effect on the creditors.

“The capital impairment rule is very similar, stimulating that dividends may not be paid if a firm’s Capital has been impaired or if dividend payment will cause capital to become impaired.” (Kreps and Wracht, 1975, p.237).

**iii. The insolvency rules:** -According to this rule, the company should not pay the dividend to the shareholders when the company is in the bankruptcy positions with liabilities exceeding the assets.

**2. Liquidity Position:** - The liquidity or the cash position of the company is the important factor which decides the payment of dividend. When the retained earning of the company is invested in assets then the company will not be in the position to pay dividend. So, greater will be the ability to pay the dividend.

“Indeed, a growing firm, even a very profitable one, typically had a pressing need for funds.” (Bringham, 1974, p 511).

“..... the National Construction Company Nepal in 2029-2031 have undertaken a large volume of contract and after contract and after completion of contract, it is faced with liquidity crises due to pending A/C receivables. This is why this company find difficult to pay dividends to government even during the period of prosperity.” (Shrestha, 1980, p.656).

**3. Need to repay the debt:** - When the company has to repay the debt, then the company can do nothing but retain the earning instead of paying the dividend. So in such a case, company cannot pay the dividend to the shareholders.

**4. Restrictions in debt contracts:** - Sometimes the company may not be restricted to pay the dividend due to the agreement with the lenders.

“Such restriction which are designed to protect the position of leader, usually stat that (1) future dividends can be paid only out of earnings generated after signing of the loan

agreement (that is, they cannot be paid out of past retained earnings) and (2) that dividends cannot be paid when net working capital (Current assets minus Current liabilities) is below the specified amount.” (Western and Copland).

**5. Growth and Investment opportunity:** -When the firm growing very rapidly, there I need of expansion of fixed assets for which fund is required. In such a case the firm prefers to retain earning rather than paying the dividend. So we can say that the growing firm need large amount of fund for which the money is retained rather than paying the dividend. So growth firms have low payout ratios.

“The more rapid the rate at which the firm is growing, the greater will be the needs for financing asset expansion. The greater the future needs for funds, the more likely the firm is retained earnings rather than pay them out.” (Brigham, 1974, p.512).

Whether earning should be used for distribution or retention depends largely on the corporate management policy of expansion. The cash requirement for growth relates to the multiplicity of growth opportunities and the growth in relation to favor opportunities tempt corporate managers to be very generous in their retained earnings.

**6. Profit rate:** - If the expected rate of return on asset in high, then it is better to use the money by the firm then to pay the dividend to the shareholders who will earn less by using the same money elsewhere.

**7. Stability of Earning:** -The firm which has stable earning is able pay higher rate of dividend then those firms which do not have stable earning. The firm with stable earning has approximately the same earning the next years too. So they can have high payout ratio. But other firms are not able to predict the next years earning so they prefer to have low payout ratio and retain more amount for coming years.

**8. Access to the capital market:** - Some reputed companies have easy access to capital markets then other. So they have high payout ratio. But those companies which do not have easy access to capital market have to use the retained earning. So they prefer to retain the earning rather than paying the dividend.

**9. Control:** - When the company pay high dividend then the new shares have to be issued to raise fund for investment. By doing this the dominant groups of shareholders are unable to

maintain their control over the company. In such a situation, the earning is retained rather than paying the dividend.

**10. Tax position of Stockholders:** -To the extent regarding how much cost dividends to be paid depend not only on the corporations own decisions but also on the various preferential needs of stockholders. The stockholders with high income tax brackets prefer to receive low dividend and high rate of earning retention, since appreciation in the value of common stock benefit them. But low income tax brackets stockholders forced corporate directors in annual general meeting to pay high rate of dividends as their derive from corporations.

“The extent of share distribution also determines the payment of dividend. A corporation with shareholders widely distributed would easily reduce dividend. But it will exactly off set the reduction in the stockholders current cash income because earnings have been retained, the equity shareholders will be quite indifferent the size of the cash dividend and the distribution Vs retention will be trivial..... Ideally management should survey the needs and desires of shareholders and use them as a basis for dividend policy, provided this is within the bounds of good financial practices,”

**11. The Clientele Effect:** - There are groups of individuals with different preferences for how they get the cash flows from the firm. Some shareholders may prefer stocks that do not pay dividends. Other shareholders may prefer stocks that pay regular dividend. Although we have seen how people can construct their own dividend policy, there are some that “prefer” for whatever reasons a certain type of dividend policy.

“Companies whose earning is relatively incentive to business cycle can usually afford high payout ratios.”- (George, 1976.p.330)

**12. Others Consideration:** - Including among these considerations are: \_

1. Government’s taxation policy: - The imposition of higher taxes can lower the earnings of corporations become unable to pay high dividend to Shareholders.  
“That fact that corporation income tax would apply only to retained earnings means that it would be differential tax on growing companies which need to retain all profit for expansion”- (Smith, 1977, p 88.,)
2. Changes in government policy,
3. Prospects for future growth,
4. Maturity and age of corporation,

5. Information context of dividend management,
6. Sponsorship and control and so on.

Investors will form their well-diversified portfolios of stocks to have the desired dividend policy. In equilibrium, no firm can affect its value by changing its dividend policy. If a firm did change the policy, it would be dropped by one clientele and picked up by another. Clearly, one clientele is as good as another. All clienteles would prefer not to be constantly rebalancing their portfolios as firms switch policies. Rebalancing is expensive due to transactions costs. Hence, all investors' transactions costs are minimized if they maintain a stable dividend policy.

### **2.1.5 General Types of Dividend Policies: -**

First, let us see the general types of policies being followed in the real world. The assumption is that policy makers take into account the factors that affect the value of the firm in whatever policies they make. But it is very difficult to say which policy, among all those being adopted by firms, is correct and optimal. We can simply group them into the following four general categories:

- 1. Stable Rupees Amount Policy:** The stable rupees dollar amount implies a steady change in dividend amount which increases at a certain constant growth rate to compensate for inflationary effect (or remains constant or decreases at a stable decreasing rate depending on the trend of earnings) irrespective of short term fluctuations in earnings. Since steady rise in dividends reflects low risk, this policy is believed to be the one that affects stock price favorably.
- 2. Constant Payout Ratio:** -The policy to distribute a certain percentage of profit every period is called constant payout ratio. The payout ratio is the ratio of dividend to profit. There are many companies which use a constant percentage of profit for dividend distribution. When a company uses a constant payout ratio, amount of dividend fluctuates as earnings do. In other words, the amount of dividend increases or decreases proportionately with earnings.
- 3. Low regular plus extras:** - This type of policy is mostly followed by those companies whose stockholders prefer at least a certain amount of regular dividend plus extra dividend based on company performance. Management fixes a minimum regular dividend to be paid in any case unless a long run trend of losses is expected. The amount of extra dividend

depends on the level of earnings. Thus, a total dividend per stock is based on a fixed amount plus a certain percentage of profit.

**4. Residual Dividend Policy:** - There are many factors, as noted before, which influence dividend policy. However, among all, earnings and investment opportunities are considered as determining factors in the residual dividend policy. The residual policy is the outcomes of the belief that stockholders are better off in reinvesting company profits and they prefer so. If the expected return on the reinvestment is higher than what individual investors can realize on their own, it is to the shareholders advantage to first invest profits in those projects that promise higher profit and then distribute only the leftover as dividends.

The residual dividend policy states that the profit should be used first in all profitable projects which reflect equal or higher rate of return than investors opportunity rate of return and only the balance of the profit that could not be utilized should be distributed as dividends.

The types of dividend policies discussed here are fairly general and some variations in practice are common. However, one thing that must be considered by financial managers in formulating a dividend policy is value maximization. It is not easy to pin point which type of policy is the best from the view point of maximizing stock prices. In general, the policy that maintains a stable dividend signals a low risk and help increase stock prices steadily. The constant payout ratio reflects a greater fluctuation and higher risk. However, stock price increase depends on company performance, market conditions and optimal dividend decisions.

### **2.1.6 Stability of Dividend**

The stability of dividend is very important since, the shareholders favor the stable dividend policy. The stability of dividend means consistency in dividend payment. If the dividend is paid regularly, then the dividend policy is stability.

*Dividend can be stable in any of the following forms: -*

- i. Constant dividend per share:** According to this form of dividend, the company follows the policy of paying certain fixed amount per share as dividend. The fixed amount is paid as the dividend irrespective of the firm's earnings. The dividend payment is not affected even if the earning is fluctuated. By following this policy, the company has to pay the dividend even if there is loss. The dividend per share is increased over the years when the earning of the firm increase and it is expected that the new level of earning is maintained.



- ii. **Constant payout ratio:** According to this form, constant percentage of earning is paid as dividend by the company to the shareholders. Each year, the same percentage of earning is paid as dividend. The dividend payment increase with the increase in earning.
- iii. **Stable rupee dividend plus extra:** Under this policy, a firm usually pays a fixed dividend to the shareholders and in years of marked prosperity, additional dividend is paid over and above the regular dividend. As soon as the normal condition returns, the firm cuts extra dividend and pays the normal dividend per share.

### **2.1.7 Reasons for following stable dividend policy:**

*There are several reasons why investors prefers stable dividend:*

- a. **Desire for current income:** - The investor always has desire for current income. The investors such as retired persons and widows view dividends as the sources of income. So they are ready to pay high price for their shares to avoid erratic dividend payments, which disrupt their investment.
- b. **Information contents:** - The investors prefer stable dividend because they use dividends and change in dividend as the source of information about the firm's profitability. If the investors know that the firm will change dividends only if the management foresees a permanent earning change, then the level of dividends informs investors about management's expectations concerning the company's earnings.
- c. **Requirements of institutional investors:** - The institutional investors such as life insurance companies, general insurance companies prefer to invest in those companies that have stable dividends. So, stable dividend policy is desirable.

### **2.1.8 Legal rules regarding dividend policy in Nepalese context**

Corporation as creatures of laws incorporated under the corporation law or statute must confirm to prescribe regulations in the declaration of dividend. If the board of directors declares dividend in violation of legal rules, they are held personally liable.

“A few states hold the directors criminally liable but the usual practice is to permit the directors to be guided by audited financial statements. Some states permit a civil suit for the recovery to corporations by directors who may have become personally liable.” (Baker and Carry, 1959, p.9)

*The legal rules are imposed by corporations Act of by laws to accomplish various purposes*

- a. Maintain the liquidity of the corporation to meet the fixed obligations.
- b. Strengthen the financial position of the corporations to assure increased net worth.
- c. Enable the corporations to exploit opportunities for its continuous growth and survival.

“Although there are many others purpose that sets limitations on the payment of dividend, but yet among all the maintenance of sound financial health is the dominant objective of imposing legal restriction on dividend, but yet among all the maintenance of sound financial health is the dominant objective of imposing legal restriction on dividend.” (Shrestha, 1980, p.666)

Some of the legal rules regarding dividend policy can be found in Company Act of Nepal. According to the Section 64 of the Company Act 1997-“debates shall be held and decision to be taken on accounts, balance sheets, and profit and loss accounts of company, the reports of the directors and auditors, the dividends to be distributed among the shareholders, the appointment of directors and auditors, the remunerations of the auditors etc, at the general meeting provided that, which debating on the dividends to be distributed among the shareholders, no decision may be made so as to increase the rate of dividend recommended by the Board of Directors.”

Similarly, according to the Section 140 of the Company Act, there are some rules regarding the dividend distribution which are as follows.

Except the following circumstances, dividends shall be distributed among the shareholders within 45 days from the date of decision to distribute them: -

- a. In case any law forbids the distribution of dividends.
  - b. In case the right to dividend is disputed.
  - c. In case dividends can not be distributed within the time limit mentioned above owing to circumstances beyond anyone’s control and with out any fault on the part of the company.
1. In case of dividends are not distributed within the time limit mentioned in sub section 1, this shall be done by adding interest at the prescribed rates.
  2. Only the person whose name stands registered in the register of existing shareholders at the time of declaring dividends shall be entitled to it.

## **2.1.9 Directives issued by Nepal Rastra Bank for Financial Institutions**

To make the net profit and dividend system more regular, transparent and systematic, the Central Bank has issued this directives under Nepal Rastra Bank Act 2058 (section 79).

### **1. Net profit distribution (appropriation)**

The company can distribute the net earning only for the following purpose, remaining within the boundary of existing law:

- a. To transfer into ordinary reserved capital.
- b. To declare and distribute dividend.
- c. To distribute bonus share
- d. To create surplus and reserve for the company
- e. To transfer into balance sheet as the retained earning.

### **2. Restrictions for declaring and distributing dividend.**

The company cannot declare dividend unless and until the following conditions are fulfilled:

- a. The company cannot pay the dividend until the price of the price of the shares in promoter's name is paid.
- b. Unless the company is registered in Nepal Stock Exchange after selling the shares to the general public as mentioned in memorandum and articles of association. (Explanation- In this case dividend only confines to cash but also include bonus share and other profit capitalization).

### **3. Restrictions for providing facilities: -**

The company cannot provide other financial facilities except dividend without the prior consent of Bank and financial institution regulation division of Nepal Rastra Bank.

### **4. The action to be taken for not following the directives for net profit and dividend.**

If the company does not follow the directives, the bank can take any action mentioned in Nepal Rastra Bank Act. 2058, section 100.

## **2.1.10. Ordinance related to Banks and Finance Companies**

Ordinance No. 46- Nepal Gazette (2062/04/21)

1. Restrictions in distributing the dividend- The registered companies cannot distribute the dividend unless and until all the initial expenses, the loss occurred until previous year, capital fund, risk management fund and reserve fund are fulfilled as mentioned in section 44. Furthermore if the share is to be allocated to the public, the dividend cannot be distributed and the full payment of share is made.
2. The registered company should get the approval of Nepal Rastra Bank before dividend is declared and distributed.

### **2.1.11. Dividend Payment Procedure**

It is necessary to clearly outline the payment procedure in the dividend policy so that market knows when the company declares dividend and pay, how they pay and whom they pay. Specifically, the policy needs to specify the followings: -

1. Declaration Date: - the date that company normally declares dividends.
2. Recorded holders of shares: - the stockholders to whom dividends to be paid.
3. Payment date: - the date the dividend is actually paid or mailed, and
4. Method of Payment: pay by mail, or credit stockholders account.

Generally, dividends are declared weeks or even months before actual payments are to be made. The company's board of directors declares dividends normally during predetermined period. The administrative procedure then is to finalize the list of the holders of shares for dividend payment. Normally, a "holder of record date" is fixed to decide who is entitled to dividend. Since stocks are traded every day (except holidays), the information of buying and selling of stocks does not reach to the company immediately upon completion of transactions, and the company record may not show the genuine owners of stock at particular point of time. It is a difficult task to figure out who are the genuine owners of shares on the "holder or record date". To overcome this problem, the practice is that security markets set up a date called: "ex-dividend date" which is generally four days prior to the "holder of record date". Those who are listed as the owners of shares in the company record on the "ex-dividend date" the buyers are entitled to receive dividend; but if the transaction takes place after such date, the sellers' right of dividends no longer goes to buyers. The dividend is paid on the payment date fixed by the company.

### **2.1.12. Claims on Assets**

When the firm becomes bankrupt, assets are sold and the proceeds distributed in this order:

1. to employees and customers
2. to the government
3. to secured creditors
4. to unsecured creditors, and
5. finally to equity shareholders. This is because equity holders are the last to receive any distribution of assets during bankrupt proceedings, they expect greater compensation in the form of dividends or rising stock prices.

### **2.1.13. Stock rights and other consideration**

Stock rights provide stockholders with the privilege to purchase additional shares of stock based on their number of owned shares.

Preemptive rights allow common shareholders to maintain their proportionate ownership in the corporation when new issues are made.

Dilution of ownership occurs when a new stock issue results in each present stockholder having a claim on a smaller part of the firm's earnings than previously.

Date of record (Right), the last date on which the recipient of a right must be the legal owner shown in the company's stock ledger.

Ex-rights, the condition under which stock is sold for a period without announced rights being attached to the stock.

Holder of record, owner of the firm's shares on the date of record, who may exercise their rights, sell them, or let them expire.

Subscription price, the price below the prevailing market price at which stock rights may be exercisable for a specific period of time.

## 2.1.14. Effects of Dividend Policy Decision on Stock Value.

In particular, the effects of stock dividend, stock split, or stock purchase, are visible in earning per share, dividend per share, stock price, and value of stock. A dividend policy decision to pay cash and/ or stock dividend, stock split or reverse split, and stock repurchase should be evaluated with reference to the effects of decision on earning per share (EPS), dividend per share (DPS), stock price, and value of stock value tells us whether a particular decision is in the best interest of stockholders. Let us see how these parameters are calculated.

1. 
$$\text{EPS} = \frac{\text{Total Earnings}}{\text{Number of outstanding stocks}}$$
2. 
$$\text{Stock Price} = (\text{Price / Earning ratio}) \times \text{EPS}$$
3. 
$$\text{Value of Stock} = \text{Stock price} + \text{DPS}$$
4. 
$$\text{DPS} = \frac{\text{Earning available for dividend}}{\text{Number of outstanding stocks}}$$

## 2.2 Review of various Studies

### 2.2.1 Review of studies in International Context.

#### 1. Modigliani and Miller Approach

Franco Modigliani and Miller provided the most comprehensive argument regarding the irrelevance of dividend in their article in 1961. They implies that dividend policy does not affect the value of the firm i.e. share price of the company. The value of the firm is affected by the company's earning which depends upon the investment policy. This theory is also known as M-M approach or dividend irrelevance model. This model is based on the following assumptions: -

- a) The firm operates in perfect capital market in which all investors are rational. Information is available to all free for cost, There are no transaction costs; securities are indefinitely divisible; no investor is large enough to influence the market price of securities; there are no flotation costs.
- b) There are no taxes. Alternatively; there are no differences in tax rates applicable to capital gains and dividends.

c) The firm has fixed investment policy. The operational implication of this assumption is that financing of new investments out of retained earnings will not change the business risk complexion of the firm and therefore, no change the business risk complexion of the firm and therefore, no change in the required rate of return.

d) Risk of uncertainty does not exist. (This assumption is dropped by MM later.)

*On the basis of the assumption MM formula to determine the value of firm is as follows: -*

### Step 1

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

$$P_0 = \frac{1}{1 + K_e} (D_1 + P_1)$$

*Where,*

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

$D_1$  = Dividend per share to be received at the end of period.

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

$K_e$  = Cost of equity capital

### Step 2

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

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

*Where,*

$n$  = number of equity shares at zero period.

### Step 3

If the firm's internal sources of financing on its investment opportunities fall short of the funds required. Then: -

$$n P_0 = \frac{nd_1 + (n + \Delta n)P_1 - \Delta n P_1}{1 + K_e}$$

Where,

$\Delta n$  = the number of new shares issued at the end of year 1 at price  $P_1$ .

#### Step 4

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

$$\Delta n P_1 = I - (E - nD_1)$$

Where,

$\Delta n P_1$  = amount obtained from the sale of new shares to finance capital budget.

$I$  = the total number of required budget

$E$  = Earning of the firm during the period.

$nD_1$  = Total Dividends paid

$E - nD_1$  = Retained Earning.

#### Conclusions

We can obtain the value of firm from the above equation but there is no role of dividend in the above equation. Therefore Modigliani and Miller concluded that dividend policy does not affect the value of firm.

#### Walter's study

Professor James E Walter's study contradicts with that of Modigliani and Miller. According to Walter dividend policy cannot be looked separately from that of investment policy. According to him, relationship between internal rate ( $r$ ) of return and cost of capital ( $k$ ) is very important in determining the dividend policy. As long as the internal rate is greater than the cost of capital, the stock price will be enhanced by retention and will vary with dividend payout.

*Assumptions of this model are as follows:-*

- All the investments are financed through retained earning and debt or equity are not issued.
- The firm's internal rate of return and cost of capital are constant.
- The entire earnings are either distributed as dividend or retains for reinvestment immediately.
- The value of EPS and DPS are kept constant forever in determining the given value.
- The firm has perpetual life.



Based on the above assumptions, Walter model to determine the market value per share is as below:-

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

Where,

P = Market price per share

DPS = Dividend per share

EPS = Earning per share

r = Internal rate of return

k = Cost of capital

*There are three conditions of the firm:-*

1.  $r > k$  If the firm's internal rate of return exceeds the cost of capital, the relation between dividend and stock price is negative. It implies that high dividend payout results in low stock prices. Such characteristics of a firm show growth share. So they are called growth firms. In this case, it is better to retain the earnings. By doing this, the shareholder's wealth is maximized, since firms are able to earn more than what the shareholders could earn by reinvesting the earnings paid to them. Market value of shares increases by dividend in the case of growth firms. The market value per share will be maximum at zero dividends.
2.  $r = k$  If the firm's internal rate of return is equal to the cost of capital, there is no relation between dividend and stock price. Such firms are termed as normal firms. So it doesn't matter whether the firm distributes dividends or retains the earnings. The market price per share will remain constant whatever will be the dividend payout ratio.
3.  $r < k$  In this situation, there is a positive relation between stock price and dividend. This type of firm is called a declining firm. By distributing the entire earnings as dividends, the value of shares will be increased to an optimum level.

### **Van Horne and Mac Donald's Study**

Van Horne and Mac Donald conducted the most comprehensive study on dividend policy & new equity financing. The study was conducted for investigating the combined effect of dividend policy and new equity financing on the market value of a firm's common stock. They used a valuation

model called cross-section regression model. The required dates were collected from 86 utility firms included on the COMPUSTAT utility data tape 39 firms in electronics and electronic-component industries listed on the COMPUSTAT industrial data.

They tested regression model for the utilities industries. They compared the results obtained the result obtained for firms, which both pay the dividends and engage in new equity financing with other firms in the industry sample. They concluded that for electric utility firm in 1968 share value is not adversely affected by new equity financing in the presence of cash dividend, more costly form of financing than the retention of earnings. They also indicate that payment of dividend through excessive equity financing reduces share prices. For electronics, electric-components industries, a significant relationship between new equity financing and value was not demonstrated.

## **Gordon's Model**

Gordon concluded that dividend policy of a firm affect its value even in the situation where the return on investment and required rate of return are equal. This model explains that investors are not indifferent between current dividend and retention of earning. The conclusion of this study is that the investors give more emphasis to the present dividend more than future capital gain. "His argument insists that on increase in dividend payout ratio lead to increase in the stock price for the reason that investor consider the dividend yield ( $D_1 / P_0$ ) is less risky than the expected capital gain. *This model is based on the following assumptions: -*

- The firm is an all equity firm.
- Internal rate of return ( $r$ ) and cost of capital ( $K_c$ ) are constant.
- The firm and its stream of earnings are perpetual.
- The corporate taxes do not exist
- The retention ration "b" once decided upon is constant. Thus the growth rate  $g=br$  is constant.
- " $K_e$ " must be greater than " $g$ " ( $br$ )
- No external financing is available, so retained earning would be used to finance for any expansion.

Based on the above assumption, Gordon has provided following formula to determine the market value of a share, which is simplified version of the original formula: -

$$P = \frac{E(1-b)}{K-br}$$

Where,

P	=	Price of the share
E	=	Earnings per share
B	=	Retention ratio
1-b	=	Percentage of earnings distributed as dividend
E(1-b)	=	Dividend per share
K	=	Capitalization rate or cost of capital
b.r.	=	Growth rate in r, e, rate of return on investment of an all equity financing.

*The above model reveals the following facts: -*

In the growth firms, the share price tends to decline in correspondence with increase in payout ratio or decreases with the retention ratio. i.e., high dividend corresponding to the earnings lead to the decrease in share price. Therefore dividends and share price are inversely correlated in the case of growth firms. But in the case of normal firm, share value remains constant regardless of changes in dividend policies. It means dividend and stock prices are free from each other in normal firms i.e.  $r=k$  firm. In decline firm, share price tends to rise in correspondence with rise in dividend and stock price are positively correlated with each other in declining firm.

### **Gerald R. Jensen and James M. Johnson's Study**

The study made by Jensen and Johnson explains about the corporate dividend reductions. The objective for this study is to provide evidence regarding the motivation for a dividend drop, the information conveyed by a drop and managerial action taken both before and after a drop. Their study extended prior research by examining 19 firms characteristics in addition to firm earnings and stock price to provide a more complete picture of firm's behavior three years before (t-3) and three years after (t+2) a dividend drop. To evaluate financial characteristics of dividend reductions companies for six years around a dividend drop, the sample consisted of firms that reduced their dividend in the period from 1974 to 1989 after establishing a stable dividend payment policy. A firm is defined as meeting the conditions that it paid a positive non-decreasing dividend for at least 12 consecutive quarters and then dropped its dividend reductions and 50 cases of dividend omissions. Their study grouped the financial variables into six major categories, they are:

Performance	Firm's earning, stock prices and dividend level
Cost Structure	Sales, Cost of sales and selling, general and administrative expenses
Financial Conditions	Cash position, current assets, current liabilities and debt ratio
Financing	Equity (common and preferred stock) and debt securities
Reconstructing	Purchasing of fixed assets, sales of fixed assets, number of employees and labor expenses
Discretionary	Research and development and advertising expenses

Information about dividend reduction is particularly relevant in light of recent research findings indicate that firm's generally increase after the dividend is reduced and earning increase thereafter. Furthermore, stock price follow a similar pattern, however, the rebound in stock prices following the dividend drop is not significant.

There findings supported that dividend reductions are the consequence of reduced earnings and deteriorating liquidity positions and levels. Although earning displays as strong trend, first down and then up, sales did not follow the same pattern. In particular, after a dividend reduction dividend drop firm tends to sell more fixed assets, purchased fewer fixed assets, spent less on R and D, and reduce employees at a faster pace. In addition SG and A expenses continue to enchase, as do current liabilities finally, the evidence was consistent with the view that dividend drop firms found it difficult to raise external financing. Overall, their results suggested that a dividend drop mark the end of a firm's financial decline and the beginning of the firm restructuring.

### **Mark E. Holder, Fredrick W. Langrehr and J. Lawrence Hexter's study**

In dividend policy literature,<sup>8</sup> Mark E. Holder, Fedric W. Langrehr and Lawrence Hexter investigated on influences of stakeholders on the firm's dividend and investment policies by examining the interaction between the dividend and investment policies. They proposed that both non-investor (customers, employees, suppliers, distributors and other firms providing complimentary goods and services) and capital suppliers have and impact on firm's dividend policy. They developed the model with data from 477 firms and over an eight year period (1983-1990) and used a pooled time series cross sectional analysis to test it.

To examine the interaction between dividend and investment policies of a firm, they firm, they used the regression equation given below as the basis for testing their hypothesis of relationship between the net organizational capital (NOC) and its dividend payout. To specify the model more fully, they included other variables based on the previous research.

## **Rony Michaely, Richard H. Thaler and Kent L. Womack's Study.**

Rony Michaely, Richard H. Thaler and Kent L. Womack investigate market reaction to dividend initiations and omissions of cash dividend payment. They also investigate both the immediate (three day) reaction to initiation of omission announcement price performance. Using the center for research in security price (CRSP) tapes. They collected all New York Stock Exchange (NYSE). American stock exchange (ASEX) companies that initiated dividends during 1964 to 1988 they define a dividend initiation as the first cash dividend payment reported to the CRSP master file. Reinvestment of a cash dividend is not considered dividend initiation for this purpose.

*The following criteria are used for inclusion in their initiation sample:*

- i. The company must have traded on the NYSE or ASEX for two years before initiation the first cash dividend.
- ii. All companies paying dividend at the end of year were excluded.
- iii. All foreign companies traded in American Depositary Receipt (ADR) were excluded from the sample.

The resulting sample contains 561 cash dividend initiation events. Unlike initiation, declaration of dividend initiation is not recorded on the CRSP tapes. The CRSP files contain announcements dates for the dividend declaration, but no dates for the subsequent omissions of irregular payout. Hence, their sample construction strategy is to select from CRSP master files. These master companies that had existed on the NYSE or ASEX for more than one year and had paid regular, periodic cash and they omitted such payment during 1964-1968. Especially for companies potential omission event in their sample, one of the following must have occurred.

- i. The company declared at least six consecutive quarterly cash payments and then paid no cash payment in calendar quarter.
- ii. The company declared at least three consecutive semi-annual cash payment and then paid to cash payments in the next six months.
- iii. The company declared at least two consecutive annual cash payment and then paid no cash payments in the next year.

The above search identified more than 1500 potential omission events in 1964-1968 periods.

*By using different statistical tools they concluded that:-*

- a. The short run impact of dividend is negative and that of the initiation is a positive initiation reaction are about one and half the magnitude of the market reaction to omission announcements.

- b. It is apparent that both the immediate and the long term reaction to omission announcements is greater than the initiation.
- c. They were able to explain short run reaction but unable to find explanation for the long term differences in price behavior between initiation and omission.

### **Shlomo Bearntzi, Roni Michaely and Richard Thaler's study**

Shlomo Bearntzi, Roni Michaely and Richard Thaler conducted a research on 'change in dividends signals future or past' in the year 1997. Using the centre research in security prices (CRSP) and COMPUSTAT tapes. They collected all companies that trade on New York Stock Exchange (NYSE) or on the American Stock Exchange for at least two years, excluding all foreign countries.

They concluded that: Even though paying dividend is costly, many companies do so, since dividend payment has good market reaction. Many theories assumed that dividend provide information to the market. They also found some evidence that firms with increasing dividend payment are likely to have decrease earning than the firms that do not increase their earning despite similar increase in earning.

### **Nil H. Hankinson Study**

Nil H. conducted the comprehensive study on to pay or not to pay the dividends. The study was conducted on daily share price changes with the announcement of a dividend change. He found that dividend are not able to improve the efficiency when the investors have homogeneous belief utility is additive and market exhibit full allocation efficiency. On the other hand, dividends are able to improve the efficiency when they are informative, provided the investors have heterogeneous belief, utility is not additive or market is incomplete.

### **Robert H. Litzenberg and Krishna Ramashwamy Study**

Robert H. Litzenberg and Krishna Ramashwamy Study have found positive relationship between expected before tax returns and dividend yields. They have discovered that stocks with high dividend provide high expected before tax returns than stock with low dividend. However by adding default risk premium variable to the extended capital assets pricing model, it can be found that dividend coefficient is not significantly different from zero and concluded that the dividend yield measure is likely to be correlated with a number of economic phenomena. Thus tax effect on dividend is in unsettled state.

## **Deepak Chawla and G. Shrinibvasan's Study**

Deepak Chawla and G. Shrinibvasan took 18 chemicals and 13 sugar companies and estimated cross section relationship for the year 1969 and 1973. The required were collected from the official directory of Bombay stock exchange. The objective of the study was:

- To establish the model to explain the share price, dividend and retained earning relationship.
- To test the dividend, retained earning hypothesis.
- To examine the structural changes in the estimated relations overtime.
- To achieve the aforementioned objectives, they used the simultaneous equation model developed by Fried and Puckett (1964) (ibid LP 138).

## **R.P. Mahapatra and P.K.Sahu's Study**

R.P. Mahapatra and P.K.Sahu studied on determinants of corporate dividend behavior in India.

An econometric analysis their study was important in the sense that it was in the sharp contradistinction with the findings of the earlier studies. The objectives of their studies were:

- To examine the relative significance of some known dividend models in explaining the corporate dividend behavior in Indian context.
- To enquire a few more determinants which were not used in previous study, with the regression model of good fit?

They selected Britain's cash follow model for further study in the Indian Context. Based on this model, their study attempted to examine the impact of few more determinants of dividend behavior with the help of their sample data.

After applying the regression model in their study, they concluded that dividend decision is primarily governed by cash flow, a measure of company's capacity to pay and dividend paid in previous year, in majority of the sample companies. Among other determinants investment demand has been found giving significant impact on the dividend decision of electrical goods and chemical industries. The impact of flow of net debt on dividend decision found significant in of new companies at the aggregate level and prepare industry at the industry group level of their study. Similarly, they found that liquidity factors turned out to be significant determinants of the dividend payout in the cotton and general engineering industry of their study. They found that determinants like interest payment, changes in sales and behaviors of share price in general did not have any significant bearing on the dividend decision of the sample companies.

## **Miller and Rock's Study**

Some researcher's emphasize the informational content of dividends. <sup>15</sup> Miller and Rock, for instance, develop a model in which dividend announcement defects emerge from the asymmetry of information between owners and managers. The dividend announcement provides shareholders and the marketplace the missing piece of information about current earnings upon which their destination of the firms future (expected) earnings is based. The latter, of course, determines the current market value of the firm. In this respect, we can clearly see the role played by dividend. The dividend announcement provides the missing piece of information and allows the market to establish the firm's current earnings. These earnings are then used in predicting future earnings.

### **2.2.2 Review of Studies in Nepalese Context.**

#### **Radhe Shyam Pradhan's study**

He conducted a comprehensive study on dividend policy. He studied the stock market of 17 firms covering the year 1986-1990. The main objectives of his study are as follows: -

- To access the stock market behavior in Nepal.
- To examine the relationship of market equity, market value, price earning and dividend with the liquidity, profitability, leverage, assets turnover and interest turnover.

*The major findings of his study are:-*

- The higher earning on stock leads to the larger ratio of dividend per share.
- Stocks with larger ratio of dividend per share to market price have lower leverage ratio.
- Stocks with larger ratio of dividend per share to market price have higher liquidity.
- The positive relationship between the ratio of dividend per share to market price and interest coverage ratio.
- Dividend per share and market price per share are positively co-related.
- Positive relationship of dividend payout with liquidity, profitability, assets turnover and assets turnover and interest coverage ratios.

#### **K.D Manandhar's Study**

Dr. K.D. Manandhar carried out his study on the topic preliminary Test of lagged Structure of Dividend : The empirical Test, Case of Corporate Firms in Nepal , based on data of seven banks, five finance companies and one manufacturing company. Major findings of his study are: -



- i. There is significant relationship between change in dividend policy in terms of dividend per share and change in lagged structure.
- ii. There is positive relationship between change in lagged consecutive earning and dividend per share.
- iii. There is relationship between distributed lagged profit and dividend.
- iv. When change in lagged consecutive earning is greater than zero, then there was change in dividend per share in sixty five percent cases.
- v. There is relationship between distributed lagged profit and dividends.
- vi. Overall increase in earning per share has resulted to the increase in the dividend payout in sixty six point six percent of the cases while decrease in EPS has resulted decrease in dividend payment.
- vii. Nepalese corporate firms have followed the practice of maintaining constant dividend payment per share.
- viii. Corporate firms do not take accounts the one year and two year lagged earning.

In overall, Nepalese corporate firms are reluctant to decrease dividend either keeping dividend payment constant or higher to take the advantages of information contents and signaling effect of dividend relating to the firms continued progress and performance, sound financial strength, favorable investment environment, lower risk, ability to maintain dividend rate and finally to increase to market price of the stock in the stock market.

### **2.2.3 Review of Master's Degree Thesis**

#### **Anjani Raj Bhattraï's Study**

Mr Anjani Raj Bhattraï has conducted the thesis with the title "Share markets in Nepal" in the year 1990. His study is based on the dividend performance of some Nepalese companies. His findings are summarized as follows: -

1. Most of the companies were paying less than the expected cash dividend per share while some of them were paying more than average cash dividend per share while higher among and low priced. So, most of the companies are disappointing the investors resulting the low marketability of the shares in the trading floor of the stock exchange.

2. Wide gap was recorded in the percentage of cash dividend paid by the listed public LTD companies. The expected percentage of dividend of investors did not match with the actual percentage.
3. Majority of the companies declaring less percentage of dividend then the risk free rate of return plus risk premium are unable to maintain investors psychology in the marketing.
4. Majority of the companies displaying lower price earning rate indicates the erosion of the believes of investors on the shares of listed companies. As a result, market price of the share is highly skewed.
5. There were mismatch between the calculated price and quoted price of share which was merely the actual price of the share. It clearly suggests that pricing of shares and market price were guided by various technical factors.

According to the author, the dividend policy was not so relevant. So, he had provided with some suggestions to improve the dividend policy which are as follows: -

**Fixation of dividend:** - Dividend is the strongest financial variables that determine the price of the shares. Higher the dividend, higher the price of shares. The practices of non-paying and paying the minimum dividend should be abolished. For this, a proper balanced policy must be evolved. So it is necessary to lay down the following minimum targets: -

- i. Minimum dividend payment.
- ii. Regular dividend payment.
- iii. Regular an extra dividend payment.

### **Pramesh K.C's Study**

Pramesh K.C. conducted his studies on Dividend Policy of Joint Venture Banks in Nepal.

*According to his findings,*

- Joint venture banks are the growth banks.
- Their market value per share are significantly fluctuated and traded on high rate.
- They are less risky and their DPS is correlated with EPS.
- Retained earning ration of these banks are fluctuated in very small proportion.
- EPS of these banks are raised the satisfactorily level.
- These banks are declaring higher dividend return on paid up capital.

### **Bishnu Hari Bhattraï's Study.**

Bishnu Hari Bhattraï has studied on "Dividend decision and its impact on stock valuation". The conclusion drawn by him are summarized in the following points: -

1. There is positive relationship between cash flow and current profit and dividend percentage shares. The degree of relationship is almost perfect.
2. In aggregate, there is no stable dividend paid by the companies over the years. Some companies have steadily increased dividend. It can be inferred that they adopted low regular plus extra dividend. Stable dividend influence considerable impact on valuation of shares if there is rational investor. However, this is yet to be realized by Nepalese company management.
3. According to him, there are no criteria to adopt payout ratio and it is observed that there is negative relationship between the payout ratio and valuation of shares.
4. Inflation rate in recent years are decreasing and the market price of shares are increasing. Nevertheless, the companies are not able to give required rate of return to the investors.
5. There was negative relationship between market price of the share and stockholder's required rate of return.
6. The positive relationship was observed on foreign investment and payment of dividend i.e. the companies invested by foreign investors are paying regular dividends than the companies financed by indigenous investor.

### **Hari Ram Aryal's Study**

Hari Ram Aryal has compared the dividend policy of Nabil Bank Ltd and Standard Chartered Bank Ltd. In his study. The conclusions drawn by him are summarized as follows: -

- The relationship between dividend per share and earning per share, net profit, net worth and stock price were found positive in these banks.
- A change in dividend per share affects the prices differently in different Banks.
- There is no uniform dividend distribution policy in both the banks.

### **Rishi Raj Gautam's Study**

Rishi Raj Gautam has compared the dividend policy of three commercial banks via NGBL, NIBL and NABIL. The objectives of his study are as follows: -

- To identify what type of dividend policy is being followed and find out whether the policy followed is appropriate or not.
- To study the impact of dividend on stock price.
- To study the relationship between DPS and other financial indicators.
- To know if there is any uniformity among DPS, EPS and DPR of the three commercial banks sampled.

*The conclusions drawn by him from his studies are as follows: -*

- There is very much fluctuation between EPS and DPS.
- Relationship between DPS and EPS is though positive, not significant.
- There may be various other factors expect EPS affecting MPS.
- The growth rate of dividend is inconsistent.
- No commercial Bank sampled has cleanly defined dividend policy.

#### **Sadakhar Timilsina's Study.**

Sadakhar Timilsina used the multiple regression models of three independent variables. Besides; he also tried to highlight the relationship between stock and other independent variables setting separate simple linear regression equations. The sectors chosen for the study were manufacturing and trading sector and banking and insurance sector. The major findings of his study are as follows:-

1. The relationship between dividend per share and stock price is positive.
2. Dividend per share affects the stock price differently in different sectors.
3. Changing the dividend policy of dividend per share might help to increase the market price of the share.
4. The relationship between stock price and retained earning per share is not prominent.

#### **Yaga Bahadur Katwal's Study**

Yaga Bahadur Katwal has compared the dividend policy between different commercial banks in Nepal. The objectives of his study are as follows: -

1. To study the current practices of dividend policy in commercial banks.
2. To find out the impact of dividend on share prices.
3. To analyze uniformity among indicators such as DPS, EPS and DPR if any, on the sample joint venture banks.

4. To analyze the relationship of DPS, EPS, DPR, P/E Ratio, Liquidity ratio and profitability ratio no market value per share.

*Major findings of his study are: -*

1. Dividends per share of all the concerned banks are satisfactory.
2. Average earning per share is also satisfactory.
3. Relationship between DPS and MVPS is fairly positive in the other hand, relationship between EPS and MPS is also positive.

### **Perna Rajbhandari's Study**

Perna Rajbhandari conducted a study on dividend policy in 2001 taking three commercial banks and three insurance companies. The main objective of her study is as follows:-

- To examine the relationship between the market price of the share.
- To identify the appropriate dividend policy followed by the banks and insurance companies.
- To analyze the relationship between dividend policy decision of banks and insurance companies.

*Major findings are:-*

- The average DPS of the sample banks are satisfactory except NABIL and EPS are satisfactory.
- The analysis of coefficient of variations shows that there is largest fluctuation in EPS and DPS.
- The analysis of dividend payout ratio shows that none of the banks are insurance companies share constant payout ratio each year. It is fluctuation from year to year.

### **Suvas Kunwar's Study**

Suvas Kunwar conducted his study on "The Dividend Policy, the comparative study between Nepal Insurance Company Limited and National Life and General Insurance Company" in July 2001. The main objectives of his study are: -

- To examine the influence of financial indicators on share prices.
- To show the relationship between dividend per share and other financial indicators.
- To check the consistency between DPS, EPS & DPR.

- To identify the dividend policy undertaken by each company and the appropriateness of the policy undertaken.

*The major findings are:-*

- There is no consistency in dividend payment and earning per share in sample companies.
- Due to the high fluctuation in the dividend yields and earning yields, market value of share is decreasing.
- Relationship between dividend per share with EPS and dividend per share with P/E ratio is not consistent in both companies.

*Limitations: -*

- The Sample size taken is very small.
- Only some financial indicators are taken for the study whereas there are so many factors which affect the dividend policy.

### **Pujan dhungel's study**

Pujan Dhungel studies on the study of dividend policy of the commercial bank in Nepal. The main objectives of his study are: -

- To find out the impact of dividend policies on value of form.
- To study are relationship of dividend policy with various financial indicators like EPS, DPS, MPS, DPR, Net worth, net profit and book value of these.

*The major findings and conclusions drawn from his studies are as follows :-*

- Among the fore simple bank, only standard chartered bank is paying dividend regularly.
- The Nepal Bangladesh bank is paying interest percentage of earning as dividend.
- The regression analysis of DPS on MPS shows that increase in MPS leads to decrease in DPS in all the sample banks except in case of SBI Bank.
- It is found the chose in dividend per share affects the value of offers different in different bank.

### **Subarna lal chitrakar's study**

Subarna lal Chitrakar studies on dividend policy and practices of commercial banks of Nepal. The main objectives of his studies are: -

- To examine relationship of dividend with various important variables such as earning per share, dividend per ratio, P.E. ratios and profitability ratio on market value per share.
- To analyze the impact of dividend on their price.
- To examine if there is any uniformity among DPS, EPS and DPR on the three sample JVBS.

*The major finding and conclusions drawn from his studies are as follows :-*

- The sample banks have got sufficient earning but some of the banks are paying first dividend while others are paying loss dividend.
- Market price of share is affected by dividend.

### **2.2.4 Review of journal and Articles:**

- Pradhan's and Adhikari's Study:

Prof. Dr Radhe Shyam Pradhan and Nav Raj Adhikari published an article on 'A Journal of Management' Published by Association of business Students, central Department, Tribhuvan University in 2004. Their paper carried to ascertain cross sectional difference in performance of stock in terms of ascertain underlying behavior of dividend per share to earning per share. Pooled cross-sectional linear regression was computed by using a data set of 00- observation covering 233 listed companies. The findings revealed that performance of stocks paying higher dividends are comparatively better than that of stocks paying lower dividends. Finding also revealed the performance is more variable for the stocks paying higher dividends.

The result of the cross-sectional analysis shows that stocks with larger ratio of DPS to book value per share have higher liquidity, lower leverage, higher assets turnover and higher interest coverage. Likewise, the stocks with larger DPS to MPS have higher assets turnover and higher interest coverage. It is also indicated that liquidity, assets turnover, interest coverage, leverage and earnings are more variables for the stocks paying higher dividends.

Similarly Radhe Shyam Pradhan conducted an outstanding study related to 'stock market behavior' in 1992. In his study he collected the data of 17 enterprises from the year 1986 to 1990. The objectives of the study are:

- To access the stock market behavior in Nepal.
- To examine the relationship of equity market value price earning and dividend with liquidity, profitability, leverage assets turnover and interest turnover.

The conclusion of the study related to dividend behavior is as follow:

- Higher earnings on stock lead the larger ratio of DPS.
- DPS and MPS are positively correlated.
- Positive relationship between dividend payout and liquidity.
- Positive relationship between dividend payout and profitability.
- Positive relationship between the ratios of DPS to market price and interest coverage.
- Stock with larger ratio of dividend per share to market price have lower leverage ratio.
- Positive relationship between dividend payout and turnover ratios.

Dr. Manohar K. Shrestha published an article on 'Management Dynamic' journal on management and economics published by Shanker Dev Campus on the topic 'A study of dividend policy and value of the firm in small stock market in 1998. On this research article following model is used

$$Y = F (X_1, X_2, X_3, X_4, X_5 )$$

Where,

Y= Value of a firm

X<sub>1</sub>= Dividend per share

X<sub>2</sub> = Earning per share

X<sub>3</sub> = Price/ Earning Ratio

X<sub>4</sub> = Return on Equity (ROE)

X<sub>5</sub> = Dividend Yield

This study aimed to identify some of significant financial variables, which are significant to the value of firm. It helps to understand the dividend. Policy of sample companies and their effect of man value of the firm as represented by market capitalization and this understanding the relevancy and irrelevancy of dividend policy on market capitalization on stock market in Nepal. The financial variables taken under study to understand the dividend policy followed one DPS, EPS P/E ratio. Return on equity and dividend yield. It is found that DPS, return on



equity and dividend yield have the significant impact whereas EPS and P/E ratio have found no significant impact on market value.

Similarly Dr. Manohar K. Shrestha study on shareholders Democracy and AGM feedback deals with the policies and financial performance of some financial institution of Nepal, which contains Dr. Shrestha's view expressed in annual general meeting of Nepal. Arab Bank has been presented here.

In his view the common problems and constraints of the shareholder's one as follows.

- The cost push inflation at exorbitant rate has made the share holders to expect higher return from their investment.
- Multiple decrease in the purchasing power of the Nepalese currency to the extent the higher return by way of dividend is just a natural economic consequence of it.
- Indo-Nepal trade and transit deadlock has become a sort of economic welfare putting rise in the lost of living index to a considerable extent. This is the reason, which made share holders to expect higher demand for satisfactory dividend.
- The waiting of 5 years with payment dividend in previous year is equally a strong enforceable reason of the bank shareholders to expect handsome dividend already assumed and committed in various reports if the earlier annual general meeting.

One way to encourage risk taking ability and performance is to have proper risk return trade off by banks management board is away that higher return must be the investment rule for higher risk takers that comprise banks shareholder.

At the end of paper Mr. Shrestha states that the bank is trying its best to satisfy the share holders and employers as well.

Another radicals published by Dr. Kamal Das Manandhar describes about the relationship of dividend payout to other financial factors based on the data of 7 commercial banks, 5 finance and insurance companies, 2 trading companies, 2 service oriented companies and 1 manufacturing company for the years 1987 to 1998.

Following are the major finding of his studies:

- Significant relationship is found between change in dividend policy in terms of dividend per share and change in lagged earnings.
- It is found that Nepalese corporate firms have followed the practice of maintaining constant dividend payout per share or increase it irrespective of change in EPS as reflected

by the total percentage of constant and increase dividend payment of 78.33 % of the case. In other words firms are reluctant to decrease dividend payment.

- Then is relationship between overall proportion of change dividend and the increase and decrease in EPS during the study period.
- In overall increase in EPS has resulted to increase in the dividend payment in 66.66% of the cases while decrease in EPS resulted in dividend payment, which come to equal to 33.34% of the case.

Similarly, Mr.Rabindra Bhattarai published an article ‘ New Business Age’ on the topic ‘Spilt Share to Benefit Small Investors ’ on his article he explained that a well performing company reflects the performance in the market price, which is beating up. Those companies whose dividend is higher like standard chartered bank, Nabil bank ltd, Nepal Uniliver Ltd, Bishal bajar Company have high market price. Although, their market price share is higher, the investors are willing to purchase the share. But small investors cannot afford to purchase the share because the market price of these share are high stock split may be good solution to drop town the prices of share, which is affordable to small investors.

# **CHAPTER III**

## **RESEARCH METHODOLOGY**

### **Introduction**

Research methodology is the method, which the researcher uses in the course of his research. This is the steps, guidelines and tools used in the research. Research methodology describes the methods used to solve the research problems. It is the guidelines followed by the researcher in order to give the result to his study. In fact, it is the outline of the research, which the researcher is going to do. So, research methodology is very important as it represent the method of entire research.

### **Research design**

Research design is the plan and structure to fulfill the objective of research. Both analytical and descriptive approaches are used in this research. The annual reports and other financial statements are studies. The data are analyzed by using financial as well as statistical tools.

### **Population and sample**

There are altogether 18 commercial banks in Nepal. It is not possible to take all the commercial banks. Although the shares of many commercial banks are traded actively in the stock market. Only five commercial banks are taken for the study. The banks which are chosen as the sample are:-

1. Nepal investment bank limited
2. Standard chartered bank limited
3. Nepal SBI bank limited
4. Nepal Bangladesh bank limited
5. Everest bank limited

### **Source of data**

The data are mostly secondary in nature. The data are collected from respective banks. Nepal stock exchange (NEPSE), Security Board, Nepal (SEBO), newspaper, magazines, websites (www.nepal stock.com, www.studyfinance.com), journals published and unpublished reports, etc.

### 3.5 Method of analysis

Various statistical and financial tools are used to analyze the data. The data are tabulated under different headings.

#### Data analysis tools

##### 3.5.1 Financial Tools

**Earning per share (EPS):-** Earning per share is calculated in order to determine the earning capacity of the company. “Apart from the rate of return, the profit ability of the firm in the point of view of shareholders is EPS.” EPS explains the profit available to the shareholders in per share basis. EPS is obtained by dividing net profit after tax by the number of shares. EPS is most widely used ratio.

$$\text{EPS} = \frac{\text{Net profit after tax}}{\text{No. of common stocks outstanding}}$$

**Dividend per share (DPS):-** The part of the earning distributed to the shareholders in the proportion to the number of shares they possess is known as DPS. Apart of net earning belonging to the shareholders is retained as retained earning and remaining is paid to them as dividend. In per share basis, DPS shows how much exactly is received by the shareholders. DPS can be calculated by dividing the total dividend by the number of share outstanding.

$$\text{DPS} = \frac{\text{Total dividend}}{\text{No. of shares outstanding}}$$

**Dividend pay-out ratio (DPR): -** DPR is the percentage of profit per share which is distributed as dividend. It measures the relationship between earning belonging to the shareholders and dividend paid. DPR can be calculated by dividing total dividend paid to the shareholders by earning available to them. DPR subtracted from 100 gives the percentage of the earning that is retained in the business.

$$\text{DPR} = \frac{\text{Total Dividend to the shareholders}}{\text{Total net earning belonging to shareholders}}$$

Alternatively, DPR can also be calculated by dividing DPS by EPS

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

**Market price per share (MPS):** - MPS is the value of share in the market, which is indicated by the NEPSE index. The MPS is determined by the capital market. MPS is closely related to the EPS and DPS.

**Dividend yield and Earning yield (DY and EY):** - DY is the proportionate of dividend per share and market value per share. EPS and DPS are based on book value of share while dividend yield is expressed in terms of market value per share. So dividend yield is closely related to EPS and DPS. DY can be calculated by dividing dividend per share by market value per share.

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

Similarly, earning yield is proportionate of EPS and Market value per share.

$$\text{EY} = \frac{\text{Earning per share}}{\text{Market value per share}}$$

**Price earning ratio (P/E ratio):** - P/E ratio is the ratio between market price per share and earning per share. So it is reciprocal of earning yield. The P/E ratio reflects the price currently being paid by market for each rupee of currently reported EPS. So, higher the P/E ratio better is for owners.

$$\text{P/E ratio} = \frac{\text{Market price per share (MPS)}}{\text{Earning per share (EPS)}}$$

### 3.5.2 Statistical Tools

The statistical tools are very important tools in the research, which helps to determine the relationship between the variables. Various statistical used in the research are as follows: -

**(i) Arithmetic Mean**

The arithmetic mean is also termed as average or measure of central tendency. Mean can be obtained by dividing the sum of all the observations by the end of observations.

Suppose,  $X_1, X_2, X_3 \dots\dots\dots X_n$  given n of observations, then mean can be calculated as: -

$$\bar{X} = \frac{\sum X}{N}$$

Where,

$$\begin{aligned} \sum X &= \text{Sum of all observations} \\ N &= \text{number of observations} \end{aligned}$$

**(ii) Standard deviations ( $\sigma$ )**

The measurement of scatter ness of the figures in a serious is known as dispersion. The absolute dispersion is called standard deviation. The greater the amount of dispersion, greater will be the standard deviation. The small standard deviation indicates that there is high degree of homogeneity in the series.

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

**(iii) The Coefficient of Variation (C.V.)**

The Coefficient of variation reflects the relationship between and standard deviation “The relative measure of dispersion comparable across which is defined as the ratio of standard deviation to mean expressed in percentage”

$$C.V. = \frac{\sigma}{\bar{X}}$$

Where,

$$\begin{aligned} \sigma &= \text{Standard Deviation} \\ \bar{X} &= \text{Mean} \end{aligned}$$

**(iv) Probable Error**

Probable error of correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r

$$\text{P.E.} = \frac{1 - r^2}{n} = 0.6745$$

(i) if  $r < \text{P.E.}$  it is insignificant, so perhaps there is no evidence of correlation.

(ii) if  $r > \text{P.E.}$  it is significant.

#### (v) Coefficient of Determination ( $R^2$ )

The coefficient of determination is a measure of degree of linear association of correlation between two variables, one dependent and another independent variable. Coefficient of determination measures the percentage of total variation independent variables explained by independent variables.  $R^2$  can have value ranging from 0 to 1. If the coefficient of determination is 0.75 it indicates that independent variables used in the regression model explains the 75% of the total variation in the dependent variables. The coefficient of determination is square of correlation coefficient.

#### (vi) Correlation Analysis

Correlation is defined as the relationship between dependent variable and independent variable. If the two or more variables are so related that the change in the value of dependent variable then they are said to have correlation. Correlation analysis is defined as the statistical technique, which measures the degree and direction of relationship between the variables. The most important methods of measuring the correlation is “Karl Pearson’s coefficient of correlations.”

$$R = \frac{\text{Cov}(x,y)}{(\sigma_x)(\sigma_y)}$$

Where,

$R$  = Coefficient of Correlation

$\sigma_x$  = Standard deviation of X

$\sigma_y$  = Standard deviation of Y

#### (vii) Regression Analysis

Regression analysis is the tool, which is used to determine the statistical relationship between two or more variables and to make the estimation of one variable on the basis of other variable.

(a) **Simple Regression Analysis:** - The analysis used to describe the average mathematical relationship between two variables is called simple regression.

(b) **Multiple Regressions Analysis:** - Multiple regressions are the statistical tool, used is used to estimate the value of one dependent variable when the value of two or more independents variable is known.

**(viii) Regression coefficient ( $b_1, b_2, b_3$ )**

The regression coefficient of each independent variable indicated the marginal relationship between the variables and value of dependent variable holding the effects of other independent variables in the regression model as constant. It describes how changes in independent variables affect the value of dependent variable estimate.

**(ix) Standard Error Estimate (S.E.E.)**

The perfect prediction with regression equation is impossible. The standard error of estimate measures the accuracy of the estimated figures. It is the extent to which observe value differs from the predicted value on the regression line. The smaller value of S.E.E. the closer will be the dots to the regression line and better estimates based on the equation for this line. If the S.E.E. is zero then there is no variation about the line and correlation will be perfect.

$$\text{S.E.E.} = \frac{(y - Y)}{N - 2}$$

Where,

Y = value of dependent variable

Y = estimated values from the estimating equation that corresponds to each y value.

N = Number of pairs observations

(y - Y) = Error

**(x) t-test**

To test the validity of our assumptions when the sample size is less than 30, t-test is used. The value of t is calculated and compared with the tabulated value of t at 5% level of significance for given degree of freedom. If the calculated value of t exceeds the tabulated value, it can conclude that there is significance difference but if the value of t is less than tabulated value, there is no significance difference.



## CHAPTER – IV

### PRESENTATION AND ANALYSIS OF DATA

The fourth chapter of the Thesis, presentation of data, is divided into three parts. The first part of chapter is descriptive analysis where comparative analysis of variable related to dividend policy of selected commercial Banks of Nepal. The second part is Correlation Analysis, the section tries to describe relationship, direction and amount, between variable. The third and last part of the chapter is regression analysis, shows how much and which direction would dependent variable depend on independent variable.

#### 4.1 Descriptive Analysis

In this section comparative study on variables related to dividend policy has done. For this, eight years data of eight commercial Banks were collected and will be presented below, The study has done on Earning per share (EPS), dividend per share (DPS), dividend payout ratio(DPR), market value per share(MVPS), price earning Multiple (P/E multiple), book value per share(BVPS), dividend yield(DY), return on equity (ROE) or internal rate of return(r), Retention ratio(b), growth of firm(g), cost of equity (Ke) and one year holding return (HPR). Further, the mean of each variable of each Bank of eight years period, standard deviation (SD) and coefficient of variance (CV) also calculated. And the data of Banks are compared with each other, Market average of particular year and overall average. Presentation and analysis of dividend and related variables are below.

##### 4.1.1

##### Presentation and analysis of EPS of selected commercial Banks of Nepal

Table 4.1	Earning Per Share (EPS) of selected Commercial Banks of Nepal								
FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	49.17	-	50.66	21.29	44.5	69.33	129.61	113.31	68.27
2001/02	13.98	24.7	68.94	21.3	67.84	33.76	105.86	86.07	52.81
2002/03	41.74	39.29	<b>116.28</b>	34.84	83.79	53.68	115.62	83.08	<b>71.04</b>
2003/04	8.69	27.97	82.81	31.56	59.26	33.18	126.88	93.57	57.99
2004/05	9.61	2	18.27	32.91	55.25	33.59	141.13	60.26	44.13
2005/06	11.47	17.72	19.86	29.9	84.66	39.56	<b>149.3</b>	49.45	50.24
2006/07	14.26	27.5	<b>0.73</b>	45.58	92.61	51.7	143.55	49.05	53.12

2007/08	13.29	30.1	--	54.22	105.49	39.5	143.93	47.91	62.06
Mean	<b>20.28</b>	24.18	51.08	33.95	74.18	44.29	<b>131.99</b>	72.84	<b>57.46</b>
SD	15.79	11.71	41.16	11.28	20.79	12.9	15.32	24.61	9.2
CV	0.78	0.48	<b>0.81</b>	0.33	0.28	0.29	<b>0.12</b>	0.34	<b>0.16</b>

The table 4.1.1 shows Earning per share (EPS) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further the table shows the Average EPS of each Bank on studied eight years period, Standard Deviation (SD) and Coefficient of Variance of EPS of each Bank. Beside this, Market Average EPS for every year, Mean EPS of market Average, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Standard Chartered Bank is the highest earning Bank, average EPS about Rs. 132, among the studied eight Banks While Nepal SBI Bank is the least earning Bank having average EPS Rs. 20.28.

NABIL and HBL are others highest earning Banks. Average EPS of the Banks are about Rs. 74 and 73 respectively. NBB and IBL are moderate earning Banks having average EPS about Rs. 51 and 44 respectively. On the other hand BOK and EBL are least earning Banks having average EPS about Rs. 24 and 34 respectively.

EPS of Banks for a particular Fiscal Year is differences from Rs. 0.73 (NBB on FY 2007/08) to Rs. 149.3 (SCBL on FY 2006/07).

#### **Chart 4.1.1**

Market average EPS on FY 2002/03 is Rs. 71.04 which is the maximum ever and Rs. 44.13 on FY 2004/05 which is lowest Market average EPS for ever. Hence average market average EPS of the Banks is Rs. 57.46.

EPS of NBB is found most inconsistent where EPS on FY 2006/07 is Rs. 0.73 and Rs. 116.28 on FY 2002/03 while EPS of SCBL is found more consistent, Rs. 105.86 on FY 2001/02 to Rs. 149.3 on FY 2005/06. Hence, CV of NBB is found 81 percent on the other hand it is only 12 percent for SCBL. Similarly, SBI Bank is another Bank having inconsistency earning since CV of EPS is 78 percent. And EPS of other Banks have Moderate Consistency.

#### 4.1.2 Presentation and analysis of DPS of selected commercial Banks of Nepal

Table 4.1.2

Dividend per share (DPS) of selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	20	0	15	0	30	50	70	50	29.38
2001/02	10	0	15	15	50	30	80	50	<b>31.25</b>
2002/03	15	0	0	0	55	25	100	50	30.63
2003/04	0	0	5	0	40	0	100	27.05	21.51
2004/05	0	10	0	0	30	0	100	25	20.63
2005/06	8	5	0	20	50	-20	110	1.32	26.79
2006/07	0	10	0	20	65	15	110	0	27.5
2007/08	0	15	0	0	70	12.5	120	11.58	28.64
Mean	6.63	5	<b>4.38</b>	6.88	48.75	19.06	<b>98.75</b>	26.87	<b>27.04</b>
SD	7.91	5.98	6.78	9.61	14.82	16.47	16.42	21.44	3.98
CV	1.19	1.2	<b>1.55</b>	1.4	0.3	0.86	<b>0.17</b>	0.8	<b>0.15</b>

The table 4.1.2 shows Dividend per share (DPS) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2004/05. Further, the table shows the Average DPS of each Bank on studied eight years period, Standard Deviation (SD) and Coefficient of Variance of DPS of each Bank. Beside this, Market Average DPS for every year, Mean DPS of market Average, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Standard Chartered Bank is the highest Cash Dividend paying Banks, having average DPS Rs. 98.75, among the studied eight Banks while NBB is the least Dividend paying Bank having average DPS only Rs. 4.38.

NABIL and SCBL are Paying Dividend Regularly while HBL has not paid one time and IBL has not paid two times. On the other hand SBI, BOK and NBB have paid four times and EBL paid only three times.

In FY 2001/02 all Banks paid Dividend except BOK. Similarly, In FY 2005/06 all paid except NBB.

#### **Chart 4.1.2**

FY 2001/02 is the highest Dividend paying year of Banks where Market Average DPS for the year was Rs. 31.25. On the other hand FY 2004/05 is lowest dividend paying year having Market Average DPS was only Rs. 20.63. Hence the Mean of Market Average DPS is Rs. 27.04.

Average DPS of HBL (Rs. 26.87), NABIL (Rs. 48.75) and SCBL are either near Mean Market Average or above it while Average DPS of other Banks are either less or far more less than Mean Market Average.

If we see the consistence on paying DPS, SCBL and NABIL are most consistent having CV of DPS 17 percent and 30 percent respectively. All other Banks have not consistency on paying dividend further SBI, BOK, NBB and EBL have very most inconsistent dividend paying history having more then 100 percent CV.

### 4.1.3 Presentation and analysis of MVPS of selected commercial Banks of Nepal

Table 4.1.3

Market Value per Share (MVPS) of selected Commercial Banks of Nepal.

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	440	<b>153</b>	252	-	430	<b>600</b>	840	755	<b>495.71</b>
2001/02	562	285	616	-	700	822	1162	1000	735.29
2002/03	562	998	<b>1502</b>	995	1400	<b>1401</b>	1985	1700	<b>1317.88</b>
2003/04	<b>1500</b>	850	1100	650	1500	1150	2144	1500	1299.25
2004/05	401	254	490	405	700	760	1575	1000	698.13
2005/06	<b>255</b>	198	360	445	740	795	1640	836	658.63
2006/07	307	295	354	680	1000	940	1745	840	770.13
2007/08	335	430	<b>265</b>	870	1505	800	<b>2345</b>	920	933.75
Mean	545.25	<b>432.9</b>	617.38	674.17	<b>996.88</b>	908.5	<b>1679.50</b>	1068.88	<b>863.59</b>
SD	401.64	316.17	451.19	231.03	420.45	253.89	498.76	342.46	300.24
CV	0.74	0.73	0.73	0.34	<b>0.28</b>	0.30	0.32	0.35	<b>0.35</b>

The table 4.1.3 shows Market value per share (MVPS) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Average MVPS of each Bank on studied eight years period, Standard Deviation (SD) and Coefficient of Variance of MVPS of each Bank. Beside this, Market Average MVPS for every year, Mean of market Average MVPS, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

MVPS of SBI Bank has dramatically increased from Rs. 440 in FY 1997/98 to Rs. 1500 in FY 2001/02 while the trend became reverse next year reached to Rs. 401. The decreasing trend further hit to the lowest point Rs. 255 in FY 2005/06. Hence, Mean MVPS of SBI Bank become Rs 545.25 which is one of the least Mean MVPS and the

CV become 74 percent shows the most inconsistent MVPS among the eight studied Banks.

MBPS of BOK has increased considerably from Rs. 153 in FY 1997/98 to Rs. 998 in FY 2002/03. The price falls slightly next year, further decreased drastically reached to Rs. 198 in FY 2005/06. After then started to recover and reached to Rs. 430 in FY 2007/08. Hence, Mean

MVPS of BOK become Rs. 432.88, which is the least average price among Banks. And the CV of MVPS of BOK, 73 percent, shows the one of the inconsistency market price.

MVPS of NBB Bank has risen dramatically from Rs. 252 in FY 2000/01 to reach a peak, Rs. 1502, in FY 2002/03. On the next years the price has caught reverse order as dramatic as rise, reached to Rs. 490 in FY 2004/05. After then the price has been decreasing steadily have reached to Rs.265 in FY 2007/08. Hence, Mean MVPS of NBB has become Rs 674.38 which is one of the least MVPS among the studied Banks. Further, CV 73 percent shows the one of most inconsistent Market Price.

MVPS of EBL has gradually decline form Rs. 995 in FY 1999/00 reach a plateau, Rs 405, in FY 2002/03. After then the price has been increasing gradually and has become Rs. 870 in FY 2007/08. Hence, the average MVPS has become Rs. 674.17 which is less then Mean Market Average, Rs. 863.59. Further, CV 34 percent shows the moderate Consistent on MVPS of EBL.

MVPS of NABIL Bank increased considerably in FY 2001/02 from Rs. 430 to Rs. 700. Then the Price increased by second fold and reached to Rs. 700 in FY 2002/03. Before showing the reverse order of drastic increase, the price once increased slightly in FY 2000/01 and reached to Rs. 700 again in FY 2004/05 from Rs. 1500. Once again, the price, caught the increasing trend, has been gradually increasing and has reached to maximum ever, Rs. 1505 in FY 2007/08. Hence the Average MVPS of NABIL become Rs. 996.88 which is moderate price among the studied Bank. Further, CV 42 percent shows the moderate inconsistent on Market Price of NABIL Bank.

### **Chart 4.1.3**

MVPS of IBL has risen considerably in FY 2001/02 from Rs. 600 in FY 2000/01 to 822. Then the price increased drastically to reach a peak, Rs 1401, in FY 2002/03.

Before showing the (IBB-BRO) trend the price fell considerably to Rs 760 in FY 2004/05 from 1150 in FY 2003/04. Hence, the average MVPS of IBL become Rs. 908.50 which is slightly above Mean of market average. Although the MVPS shows the moderate price, CV 28 percent shows the most Consistent market price among the studied Banks.

MVPS of SCBL has increased considerably in the second, third and fourth year of studied period, from Rs. 840 in FY 2000/01 to Rs. 1162 in 2001/02, Rs. 1985 in 2002/03 and Rs. 2144 in 2003/04. After then the price decreased sharply to become Rs. 1575 in FY 2004/05. Once again, the Market Price of SCBL increased steadily in FY 2005/06 and 2006/07. Further, the trend did not remain same. In FY 2007/08 the MVPS of SCBL increased dramatically to reach a peak, Rs. 2345 which is the maximum price ever in Market Price history of Commercial Banks of Nepal. Hence, average MVPS of SCBL of eight years period becomes Rs. 1679.50 which is the maximum average among the studied Banks. Further, CV 30 percent shows the one of the Consistent market price.

MVPS of HBL Bank has increased considerably in second and third year of studied period from Rs. 755 in FY 1997/98 to Rs 1000 in 2001/02 and Rs. 1700 in 2002/03. After then the price showed the reverse trend to reach the price Rs. 836 in 2005/06. Now, the MVPS has been increasing steadily and has reached Rs. 920 in FY 2007/08. Hence. Mean MVPS of HBL becomes RS. 1068.88, which is second most average MVPS among the studied Banks. Further, CV 32 percent shows the one of the consistent market price.

#### 4.1.4 Presentation and analysis of *P/E* multiple of selected commercial Banks of Nepal.

**Table 4.1.4**

**Price Earning (*P/E*) Multiple of selected Commercial Banks of Nepal.**

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	8.95	-	<b>4.97</b>	-	9.66	8.65	6.48	<b>6.66</b>	<b>7.56</b>
2001/02	40.20	11.54	8.94	-	10.32	24.35	10.98	11.62	16.85
2002/03	13.46	25.40	12.92	28.56	16.71	26.10	17.17	<b>20.46</b>	20.10
2003/04	172.61	30.39	13.28	20.60	25.31	34.66	16.90	16.03	41,22
2004/05	41.73	127.00	26.82	12.31	12.67	22.63	11.16	16.59	33.86
2005/06	22.23	11.17	18.13	14.88	8.74	20.10	10.98	16.91	15.39
2006/07	21.53	10.73	<b>484.93</b>	14.92	10.80	18.18	12.16	17.13	73.80
2007/08	25.21	14.29	-	16.05	14.27	20.25	16.29	19.20	17.94
Mean	43.24	32.93	<b>81.43</b>	17.88	<b>13.56</b>	21.86	12.76	15.58	<b>28.34</b>
SD	53.52	42.20	178.06	5.89	5.42	7.39	3.74	4.43	21.28
CV	1.24	1.28	<b>2.19</b>	0.33	0.40	0.34	0.29	<b>0.28</b>	<b>0.75</b>

The table 4.1.4 shows Price Earning (*P/E*) Multiple of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Mean *P/E* Multiple of eight years period for each Bank, Standard Deviation (*SD*) and Coefficient of Variance of *P/E* Multiple of each Bank. Beside this, Market Average *P/E* Multiple for every year, Mean of market Average *P/E* Multiple, *SD* and *CV* of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

*P/E* Multiple of NBB is found most inconsistent among the studied Banks. The Multiple of the Bank for FY 2000/01 was only 4.97 which is the lowest point ever while it was 484.93 for FY 2006/07 which is highest point ever and among the eight Banks. Hence, Mean *P/L* Multiple of NBB Banks has become 81.43 which is the highest point among the Banks.



#### Chart 4.1.4

P/L Multiple of HBL is found most consistent among the studied Banks. The P/L Multiple of HBL vary from 6.66 in FY 2000/01 to 20.46 in FY 2002/03. Hence, Mean P/L Multiple has become 15.58, SD 4.43 percent and CV 28 percent.

Similarly, SBI and BOK have inconsistency P/E Multiple having CV 1.24 and 1.28 respectively. On the other hand EBL, NABIL and IBL have moderate Consistence having CV 33, 40 and 34 percent respectively and SCBL have consistency P/E Multiple having CV 29 percent.

#### 4.1.5 Presentation and analysis of BVPS of selected commercial Banks of Nepal

Table 4.1.5

##### Book value per Share (BVPS) of selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	160.66	80.41	150.00	108.37	211.00	272.04	389.61	-	196.01
2001/02	164.22	96.33	207.00	122.61	224.00	273.63	282.26	-	195.72
2002/03	187.54	195.38	330.00	171.24	251.00	303.10	298.88	362.70	262.48
2003/04	165.73	207.72	248.00	144.57	216.00	275.96	327.50	240.19	228.21
2004/05	131.88	171.83	174.00	170.76	233.00	307.95	363.86	220.02	221.61
2005/06	134.03	192.52	190.00	150.10	267.00	216.24	403.15	247.81	225.11
2006/07	146.80	218.38	182.00	171.52	301.00	246.89	399.25	246.93	239.10

2007/08	159.54	213.60	-	219.87	337.00	200.80	422.38	239.59	256.11
Mean	<b>156.30</b>	<b>172.02</b>	<b>211.57</b>	<b>157.38</b>	<b>255.00</b>	<b>262.08</b>	<b>360.86</b>	<b>259.54</b>	<b>228.05</b>
SD	18.28	53.77	60.44	34.44	44.56	38.36	52.12	51.52	24.54
CV	<b>0.12</b>	<b>0.31</b>	<b>0.29</b>	0.22	0.17	0.14	0.20	<b>0.11</b>	<b>0.11</b>

The table 4.1.5 shows Book Value per Share (BVPS) of eight commercial Banks of Nepal from Fiscal Year 2000/1 to 2007/08. Further, the table shows the Mean BVPS of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of (BVPS) of each Bank. Beside this, Market Average BVPS for every year, Mean of market Average BVPS, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Book Value of all Banks except SCBL was in increasing trend in first three years. FY 2000/01, 2001/02 and 2002/03, of studied period. The trend was prolonged next one year for BOK but the value of all other Bank has decreased in FY 2003/04.

In case of SCBL the Book Value was fall sharply in the Second Year from Rs. 389.61 in FY 2000/01 to Rs. 282.26 in 2001/02. But the Bank caught its way to growth up to the final year studied period except slightly negative growth of Book value in FY 2006/07.

Similarly, Book value of NABIL has been increasing from FY 2003/04. Book Value of all other Banks, beside NABIL and SCBL, has slightly positive or negative growth from FY 2003/04.

If we see the average, SCBL has highest Average Book value, Rs. 360.86 among the studied Banks. And Average Book Value of NABIL, IBL and HBL are higher then mean of Market Average, Rs. 228.05 while other Banks, SBI, BOK, NBB and EBL, have Mean Book Value per share less then Mean of Market Average.

### Chart 4.1.5

If we see the consistency of Book Value, SBI has least inconsistent Book Value having 12 percent.

CV while BOK has the most inconsistent BVPS having 31 percent among the studied Bank. NBB is another Bank having least consistency BVPS with 29 percent CV. NABIL, EBL and HBL have moderate consistency on BVPS with 17, 22 and 20 percents CV respectively. And IBL and SCBL have comparatively least inconsistent BVPS with CV 15 and 14 percents respectively.

### 4.1.6 Presentation and analysis of Dividend Yield (DY) of selected commercial Banks of Nepal

Table 4.1.6

Dividend Yield of selected Commercial Banks of Nepal.

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	IIBL	Market Average
2000/01	0.05	0.00	0.06	-	0.07	0.08	0.08	<b>0.07</b>	0.06
2001/02	0.02	0.00	0.02	-	0.07	0.04	0.07	0.05	0.04
2002/03	0.03	0.00	0.00	0.00	0.04	0.02	0.05	0.03	0.02
2003/04	0.00	0.00	0.00	0.00	0.03	0.00	0.05	0.02	0.01
2004/05	0.00	0.04	0.00	0.00	0.04	0.00	0.06	0.03	0.02
2005/06	0.03	0.03	0.00	0.04	0.07	0.03	0.07	0.00	0.03
2006/07	0.00	0.03	0.00	0.03	0.07	0.07	0.00	0.03	0.03
2007/08	0.00	0.03	0.00	0.00	0.05	0.07	0.05	0.01	0.02

Mean	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.02</b>	<b>0.06</b>	<b>0.03</b>	<b>0.03</b>
SD	0.02	0.02	0.02	0.02	0.02	0.03	0.01	0.02	0.01
CV	<b>1.18</b>	<b>1.09</b>	<b>1.93</b>	1.60	0.32	1.10	0.02	<b>0.91</b>	<b>0.05</b>

The table 4.1.6 shows Dividend Yield of eight commercial Banks of Nepal from Fiscal Year 1997/98 to 2004/05. Further, the table shows the Mean Dividend Yield of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of Dividend Yield of each Bank. Beside this, Market Average Dividend Yield for every year, Mean of Market Average Dividend Yield, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Over all dividend yield of eight Commercial Banks of Nepal on the studied eight years period is only 3 percent. FY 2000/01 and 2001/02 had most dividend yield with 6 and 4 percent respectively. In FY 2003/04 1, the dividend yield is least having only 1 percent. Hence, Standard deviation is 1 percent and Coefficient of Variation (CV) is 51 percent shows the moderate inconsistent in market average Dividend Yield.

#### **Chart 4.1.6**

Comparative study of Banks shows that SCBL has maximum dividend Yield with Average 6 percent and NABIL is in second most position with average 5 percent Dividend Yield. Similarly, HBL has moderate Dividend Yield with 3 percent equal to Mean of Market average. And SBI, BOK and IBL have Comparatively less Dividend Yield, average 2 percent. On the other hand NBB and EBL have the least Dividend Yield, average 1 percent only.

If we see the consistency on Dividend Yield, SCBL has most consistencies Dividend Yield with 20 percent CV and NABIL has moderate consistence Dividend Yield with

32 percent CV. All other Banks have inconsistency on Dividend Yield. CV of all Banks except HBL, 91 percent, crosses 100 percent.

#### 4.1.7 Presentation and analysis of ROE of selected commercial Banks of Nepal

Table 4.1.7

##### Return on Equity (ROE) of selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.31	-	0.34	0.2	0.21	0.25	0.33	-	<b>0.27</b>
2001/02	0.09	0.26	0.33	0.17	0.3	0.12	0.38	-	0.24
2002/03	0.22	0.2	0.35	0.2	0.33	0.18	0.39	0.23	0.26
2003/04	0.05	0.13	0.33	0.22	0.27	0.12	0.39	0.39	0.24
2004/05	0.07	0.01	0.11	0.19	0.24	0.11	0.39	0.27	<b>0.17</b>
2005/06	0.09	0.09	0.1	0.2	0.32	0.18	0.37	0.2	0.19
2006/07	0.1	0.13	0	0.27	0.31	0.21	0.36	0.2	0.2
2007/08	0.08	0.14	-	0.25	0.31	0.2	0.34	0.2	0.22
Mean	<b>0.13</b>	0.14	0.22	0.21	0.29	0.17	<b>0.37</b>	0.25	<b>0.22</b>
SD	0.09	0.08	0.15	0.03	0.04	0.05	0.02	0.08	0.03
CV	<b>0.71</b>	0.57	0.66	0.14	0.15	0.30	<b>0.06</b>	0.30	<b>0.16</b>

The table 4.7 shows Return on Equity (ROE) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Mean ROE of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of ROE of each Bank. Beside this, Market Average ROE for every year, Mean of Market Average ROE, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Overall ROE of eight Banks on studied eight years period is 22 percent. On which FY 2000/01 had maximum ROE with 27 percent market average and FY 2004/05 had minimum with 17 market average ROE. Hence, Standard deviation is 3 percent and CV is 16 percent show the consistency of Market Average ROE during the studied eight years period.

Comparative study on ROE of Banks shows that SCBL has maximum ROE among the studied eight Banks with Average 37 percent while SBI has Least ROE with average 13 percent. Similarly, NABIL, HBL and NBB have moderate ROE with average 29, 25 and 22 percent

respectively. On the other hand, BOK, EBL and IBL have comparatively less ROE with average 14, 21 and 17 percent respectively.

#### Chart 4.1.7

If we see the consistency on ROE of Banks, SCBL has most consistence ROE with only 6 percent CV while SBI has most inconsistence ROE with 71 percent CV. Similarly, BOK and NBB have inconsistence ROE with 57 and 66 percent CV and IBL and HBL have moderate consistence ROE with 30 percent CV each. On the other hand, EBL and NABIL have comparatively more consistent ROE with 14 and 15 percent CV.

#### 4.1.8 Presentation and analysis of Retention ratio (b) of selected commercial Banks of Nepal

Table 4.1.8

Retention ratio (b) of selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.59	-	0.70	1.00	0.33	0.28	0.46	0.56	0.56
2001/02	0.28	1.00	0.78	0.30	0.26	0.11	0.24	0.42	0.43
2002/03	0.64	1.00	1.00	1.00	0.34	0.53	0.14	0.40	0.63
2003/04	1.00	1.00	0.94	1.00	0.33	1.00	0.21	0.71	<b>0.77</b>
2004/05	1.00	<b>-4.00</b>	1.00	1.00	0.46	1.00	0.29	0.59	<b>0.17</b>
2005/06	0.30	0.72	1.00	0.33	0.41	0.49	0.26	0.97	0.56
2006/07	1.00	0.64	1.00	0.56	0.30	0.71	0.23	1.00	0.68
2007/08	1.00	0.50	-	1.00	0.34	0.68	0.17	0.76	0.64

Mean	0.73	<b>0.12</b>	0.92	0.77	0.34	0.60	0.25	0.68	0.55
SD	0.32	1.83	0.12	0.32	0.06	0.32	0.10	0.23	0.19
CV	0.43	<b>14.96</b>	<b>0.13</b>	0.42	0.18	0.52	0.39	0.34	<b>0.34</b>

The table 4.1.8 shows Percent Retained of Earning (b) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Mean Retained Earning of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of Retained Earning of each Bank. Beside this. Market Average Retained Earning for every year, Mean of Market Average Retained Earning. SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

#### Chart 4.1.8

Overall retained earning of eight Banks over eight years period is 55 percent. FY 2000/01 is highest retained year with 77 percent market average and FY 2004/05 is least retained year with 17 percent market average. Hence, 19 percent SD and 34 percent CV show the moderate inconsistency on market average retained earning.

Comparative study of Banks shows that BOK has least retained with average 12 percent While NBB has most retained with average 92 percent. Similarly, SBI and EBL have comparatively more retained with average 73 and 77 percent retained while NABIL and SCBL have comparatively less retained with average 34 and 25 percent respectively. On the other hand, IBL and HBL have moderate retained with average 60 and 68 percent.

If we see the consistency on percent retained by Banks during studied eight years period, we will found that BOK has most inconsistent retained earning. Due to which

is cause of minus 400 percent retained earning in FY 2004/05, that is the Bank has paid dividend form last years retained earning. NBB has most consistent retained among the studied eight Banks with 13 percent CV and NABIL has comparatively more consistent retained earning with 18 percent CV. On the other hand SBI, EBL, IBL and SCBL have comparatively more inconsistent Retained Earning with 43, 42, M 52 and 39 percent CV respectively. And HBL has moderate consistency on retained earning having 34 percent equal to market average CV.

#### 4.1.9 Presentation and analysis of growth rate (g) of selected commercial Banks of Nepal

Table 4.1.9

Growth rate (g) of Selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.18	-	0.24	0.20	0.07	0.07	0.15	-	0.15
2001/02	0.02	0.26	0.26	0.05	0.08	0.01	0.09	-	0.11
2002/03	0.14	0.20	0.35	0.20	0.11	0.09	0.05	0.09	0.16
2003/04	0.05	0.13	0.31	0.22	0.09	0.12	0.08	0.28	0.16
2004/05	0.07	-0.05	0.11	0.19	0.11	0.11	0.11	0.16	0.10
2005/06	0.03	0.07	0.10	0.07	0.13	0.09	0.10	0.19	0.10
2006/07	0.10	0.08	0.00	0.15	0.09	0.15	0.08	0.20	0.11
2007/08	0.08	0.07	-	0.25	0.11	0.13	0.06	0.15	0.12
Mean	0.09	<b>0.11</b>	0.20	0.17	0.10	0.10	0.09	0.18	0.13
SD	0.06	0.10	0.13	0.07	0.02	0.04	0.03	0.06	0.03
CV	0.65	<b>0.91</b>	<b>0.65</b>	0.43	0.20	0.43	0.35	0.34	<b>0.21</b>

The table 4.1.9 shows Growth rate (g) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Mean Growth of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of Growth of each Bank. Beside this, Market Average Growth for every year. Mean of Market Average Growth, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Overall Growth rate of eight Banks over the eight years period is 13 percent variation from 16 percent market average in FY 2002/03 and 2003/04 to 10 percent in FY 2004/05 and 2005/06. Hence, standard deviation (SD) 3 percent and 21 percent CV show the consistent of market average growth.



#### **Chart 4.1.9**

Comparative study of Banks shows that NBB is the most growth Bank having average 20 percent growth rate While SBI and SCBL are the least growth Bank with 9 percent average growth rate each. Similarly, EBL and HBL are comparatively growth Banks with 17 and 18 percent average growth rate. And BOK, NABIL and IBL are comparatively less growth Banks with 11, 10 and 10 percent growth rate.

If we see the consistency of growth rate of Banks, BOK has the most inconsistent growth with 91 percent CV while the NABIL has the most consistent growth among the studied eight Banks with 20 percent CV. The main cause of inconsistency of BOK is the negative growth of Bank in FY 2004/05.

Similarly, other inconsistent growth Banks are SBI and NBB with 65 percent CV each. And EBL and IBL have comparatively less inconsistent growth with 43 percent CV each. On the other hand, SCBL and HBL have comparatively less consistent growth with 35 and 34 percent CV.

#### 4.1.10 Presentation and analysis of cost of equity (Ke) of selected commercial Banks of Nepal

Table 4.1.10

Cost of equity (Ke) of Selected Commercial Banks of Nepal

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.23	-	0.30	-	0.14	0.15	0.24	-	<b>0.21</b>
2001/02	0.04	0.26	0.28	-	0.15	0.05	0.16	-	0.16
2002/03	0.17	0.20	<b>0.35</b>	0.20	0.15	0.11	0.10	0.12	0.18
2003/04	0.05	0.13	0.32	0.22	0.12	0.12	0.13	0.29	0.17
2004/05	0.07	<b>-0.01</b>	0.11	0.19	0.15	0.11	0.18	0.19	<b>0.12</b>
2005/06	0.06	0.09	0.10	0.11	0.20	0.12	0.16	0.20	0.13
2006/07	0.10	0.11	0.00	0.18	0.16	0.16	0.15	0.20	0.13
2007/08	0.08	0.11	-	0.25	0.15	0.15	0.11	0.16	0.14
Mean	<b>0.10</b>	0.13	<b>0.21</b>	0.19	0.15	0.12	0.15	0.19	<b>0.16</b>
SD	0.06	0.08	0.14	0.05	0.02	0.04	0.04	0.06	0.03
CV	0.65	<b>0.66</b>	0.65	0.24	<b>0.15</b>	0.30	0.28	0.30	<b>0.19</b>

The table 4.1.10 shows Cost of Equity (Ke) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08. Further, the table shows the Mean Cost of Equity of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance of Cost of Equity of each Bank. Beside this, Market Average Cost of Equity for every year, Mean of Market Average Cost of Equity, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

Overall Cost of Equity of eight studied Banks over the eight years period is 16 percent. The rate is differs from 21 percent Market Average in FY 2000/01 to 12 percent Market Average in FY 2003/04. Hence, SD 3 percent and CV 19 percent show the moderate consistency of Market Average Cost of Equity.

Comparative study of Banks shows that NBB has the highest point. 21 percent, of Average Cost of equity among the eight studied Banks While SBI has the least, 10 percent. Similarly, EBL and HBL have comparatively higher, more then overall point, 19 percent each While BOK and IBL have comparatively less, 13 and 12 percent respectively, average cost of equity. On the other

hand, NABIL and SBL have moderate, 15 percent each, average cost of equity, slightly below the Mean Market Average.

**Chart 4.1.10**

If we see the consistency of Cost of equity, we will found that NABIL has most consistent, 15 percent CV, cost of Equity While BOK has least consistent, 66 percent CV. Similarly, SBI and NBB have comparatively less consistent Cost of Equity with 65 percent CV each. On the other hand EBL, IBL, SCBL and HBL have moderate consistent Cost of Equity having 24, 30, 28 and 30 percent CV respectively.

#### **4.1.11 Presentation and analysis of one year HPR of selected commercial Banks of Nepal**

**Table 4.1.11**

**One year holding return (HPR) from Selected Commercial Banks of Nepal**

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	-	-	-	-	-	-	-	-	
2001/02	0.30	0.86	<b>1.50</b>	-	0.74	0.42	0.48	0.39	0.67
2002/03	0.03	<b>2.50</b>	1.44	-	<b>1.08</b>	<b>0.73</b>	<b>0.79</b>	<b>0.75</b>	<b>1.05</b>
2003/04	<b>1.67</b>	-0.15	- 0.26	- <b>0.35</b>	0.10	- 0.18	0.13	- 0.10	0.11
2004/05	- <b>0.73</b>	<b>-0.69</b>	- <b>0.55</b>	- 0.38	<b>-0.51</b>	- <b>0.34</b>	<b>-0.22</b>	- <b>0.32</b>	<b>-0.47</b>
2005/06	- 0.34	-0.20	- 0.27	0.15	0.13	0.07	0.11	- 0.16	-0.06
2006/07	0.20	0.54	- 0.02	<b>0.57</b>	0.44	0.20	0.13	0.00	0.26
2007/08	0.09	0.51	-	0.28	0.58	-	0.41	0.11	0.20

			0.25			0.14			
Mean	0.17	<b>0.48</b>	0.23	<b>0.06</b>	0.36	0.11	0.26	0.10	<b>0.22</b>
SD	0.75	1.04	0.86	0.41	0.52	0.37	0.33	0.37	0.49
CV	4.32	2.15	3.80	<b>7.42</b>	1.42	3.39	<b>1.24</b>	3.79	<b>2.22</b>

The table 4.1.11 shows One year holding return (HPR) of eight commercial Banks of Nepal from Fiscal Year 2000/01 to 2007/08 for every year. Further, the table shows the Mean HPR of eight years period for each Bank, Standard Deviation (SD) and Coefficient of Variance (CV) of HPR for each Bank. Beside this, Market Average HPR for every year, Mean of Market Average HPR, SD and CV of Market Average is calculated based on these eight Banks. From the study of table following evidences are found.

**Chart 4.1.11**

Overall HPR of these eight Banks Over eight years period is 22 percent. FY 2002/03 is the year having Maximum HPR with 105 percent While FY 2004/05 has Least HPR with negative 47 percent.

Most of the have their best return in FY 2001/02, further BOK have tremendous return ever, 250 percent. All of the Banks have negative HPR in FY 2004/05 with 73 percent negative return of SBI to 22 percent negative return of SCBL.

Comparative study of Banks shows that BOK has maximum average HPR with 48 percent while EBL has minimum average with 6 percent among the eight Banks. HPR of NBB, NABIL and SCBL are more then Overall average, respectively 23, 36 and 26 percent while HPR of SBI, IBL and HEL are less then Overall average HPR, respectively 17, 11 and 10 percent.

If we see the consistency, we will found that there is so much inconsistent on HPR of all Banks with 49 percent overall SD and 222 percent Overall CV. Here the question is not which Bank has Consistent HPR and which has inconsistent but the question is which Bank has least inconsistent HPR? If we see from this side, we will found that SCBL has least inconsistent HPR with 124 percent CV while EBL has most inconsistent HPR with 742 percent CV.

## **4.2 Correlation Analysis**

In this part of data presentation and analysis chapter, correlation analysis has done. For this EPS, DPS, DPR, MVPS, BVPS, DY, Rt, ROE, Ke, HPR, Lagged DPS and Lagged P/E multiple are taken into consideration. First of all correlation matrix is derived from SPSS program then the output is split as per requirement to analysis which is done as follows.

**Table 4.2.**  
**Correlation Matrix**

	EPS	DPS	DPR	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HPR	Dt-1	P/Et-1
EPS	1	.866**	0.089	.760**	322*	.848**	.626**	-0.089	.860**	0.173	.415**	0.216	.869**	307*
DPS		1	.301*	.702**	- 0.197	.742**	.776**	.301*	.686**	.280*	-0.014	0.115	.945**	-0.203
DPR			1	0.034	0.069	0.121	.432**	-1 **	-0.028	- .495**	- .359**	-0.151	.207	-0.071
MVPS				1	-0.115	.696**	.249	-0.034	.595**	0.039	.116	.315*	.813**	-0.287*
P/E t					1	-0.184	-0.239	-0.069	- .450**	-0.328*	- .432**	-0.019	-0.184	.014
BVPS						1	.536**	-0.121	.508**	-0.063	.126	.137	.800**	-0.320*
DY							1	- .432**	.543**	-0.325*	.017	.073	.719**	-0.220
Rt								1	.028	.495**	.359**	.151	-0.207	.071
ROE									1	.449**	.675**	.251	.693**	-0.369*
G										1	.938**	.196	-0.181	-0.149
Ke											1	.228	.019	-0.242
HPR												1	.116	-0.248
Dt-1													1	-0.211
P/Et-1														1

Where,

\*\* . Correlation is significant at 0.01 level (2-tailed)

\* . Correlation is significant at 0.05 level (2-tail)

#### 4.2.1 Correlation between EPS and DPS, MVPS, BVPS and other Variables:

	EPS	DPS	DPR	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HPR	Dt-1	P/Et-1
EPS	1	.866		.760	-.322	.848	.626		.860		.415		.869	.307

Correlation of EPS with DPS, BVPS, ROE and, Dt-1 are highly positive, with DY and MVPS upper moderately positive and with Ke lower moderately positive While with  $P/E$  and  $P/E$  t-1 are considerable negative. On the other hand correlation of EPS with DPR, Rt, G and HPR insignificant.

#### 4.2.2 Correlation between DPS and MVPS, BVPS, ROE and other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et-1
DP S	.866	1	.301	.702		.742	.776	-.301	.686	-.280			.945	

Correlation of DPS with MVPS, BVPS, DY and ROE are upper moderately positive. With EPS highly Positive, with Dt-1 extreme highly positive and with DPR considerable positive while the correlation of DPS with Rt and G are considerable negative. On the other hand correlation of DPS with  $PIEt$ , Ke, HPR and  $PIEt$ -1 are insignificant.

#### 4.2.3 Correlation between DPR and G and other Variables:

	EPS	DPS	DPR	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HPR	Dt-1	P/Et-1
DPR		.301	1				.432	-.1		-.495	-.359			

Correlation of DPR with G is moderately negative, means as the DPR is decreased the growth of a firm would be increased and vice-versa. Similarly, correlation between DPR and Ke is lower moderate negative While with DY moderately positive and With DPS considerable positive. On the other hand correlation between DPR and MVPS,  $P/Et$ , BVPS, ROE, HPR, Dt-1 and  $P/Et$ -1 is insignificant.

#### 4.2.4 Correlation between MVPS and EPS, DPS, Dt-1 and other variables:

	EP S	DPS	DP R	MVPS	P/Et	BVPS	DY	R <sub>t</sub>	ROE	G	Ke	HP R	Dt-1	P/Et- 1
MVP S	.76 0	.702		1		.696			.595			.315	.813	-.287

Correlation between MVPS and EPS, DPS and Dt-1 is highly positive, with BVPS upper high positive and with ROE moderately positive. Similarly correlation between MVPS and HPR is considerable positive while the correlation is considerable negative between  $P/E t-1$ . On the other hand correlation between MVPS and DPR, P/Et, DY, Rt, G and Ke is insignificant.

#### 4.2.5 Correlation between P/Et and EPS, MVPS and other Variables:

	EPS	DPS	DPR	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HPR	Dt-1	P/Et- 1
P/E t	- .322				1				-.450	- .328	- .432			

Correlation between P/Et and EPS is considerable negative while the correlation between P/Et and MVPS is insignificant. Correlation between P/Et and ROE and Ke is moderately negative and P/Et and G is considerable negative. On the other hand correlation between P/Et and DPS, DPR, MVPS, BVPS, DY, Rt, HPR, Dt-1 and P/Et-1 is insignificant.

#### 4.2.6 Correlation between BVPS and EPS, DPS, Dt-1 and other variables:

	EP S	DPS	DP R	MVPS	P/Et	BVPS	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
BVP S	.84 8	.742		.696		1	.536		.508				.800	-.320

Correlation between BVPS and EPS and between BVPS and Dt-1 are highly positive while correlation of BVPS with P/Et-1 is considerable negative. Similarly, correlation of BVPS with DPS and MVPS is upper moderate positive and with ROE moderate positive. On the other hand, correlation of BVPS with DPR,  $P/Et$ , Rt, G, Ke, HPR are insignificant.

#### 4.2.7 Correlation between DY and DPS, Dt-1 and other Variables:



	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
DY	.62 6	.776	.432				1	-.432	.543	- .325			.719	

Correlation of DY with DPS and Dt-1 are highly positive. Similarly, correlation of DY with DPR and ROE are respectively lower moderate positive and moderate positive while the relationship is lower moderate negative with Rt and considerable negative with G. on the other hand, correlation of DY with MVPS, P/Et, BVPS, Ke, HPR and P/Et-1 are insignificant.

#### 4.2.8 Correlation between Rt and DPR, G, Ke and other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
Rt		-.301	-1					1		.495	.359			

Correlation between Rt and DPR is absolute negative that is -1 while the relationship is considerable negative with DPS. On the other hand Correlation of Rt with G and Ke are moderate positive and lower moderate positive respectively while Correlation of Rt with EPS, MVPS, P/Et, BVPS, DY, ROE, HPR, Dt-1 and P/Et-1 are insignificant.

#### 4.2.9 Correlation between ROE and EPS, DPS, Ke, Dt-1 and other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
RO E	.86 0	.686		.595	- .450	.508	.54 3		1	.449	.675		.693	-.369

Correlation between ROE and EPS is highly positive. Similarly, correlation of ROE with DPS, MVPS and Dt-1 are upper moderate positive and with BVPS, DY and G moderate positive while the relationship is lower moderate negative and considerable negative with P/Et and P/Et-1 respectively. On the other hand, correlation of ROE with DPR, Rt and HPR are insignificant.

#### 4.2.10 Correlation between G and Ke and Other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
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G		-.280	-.495		-.328	-.325	.495	.449	1	.938				
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Correlation between G and Ke is extreme high positive. Similarly, correlation of G with Rt and ROE are moderate positive and lower moderate positive while the relationship with DPR is moderate negative and with DPS, P/Et and DY are considerable negative. On the other hand, correlation of G with EPS, MVPS, BVPS, HPR, Dt-1 and P/Et-1 are insignificant.

#### 4.2.11 Correlation between Ke and ROE, G and Other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
Ke	.415		-.359		-.432			.359	.675	.938	1			

Correlation between Ke and ROE is upper moderately positive and relationship between Ke and G is extreme positive. Similarly, correlation between Ke and EPS and Rt are lower moderate positive while the correlation and Ke and DPR and P/Et are lower moderate negative. On the other hand, correlation between Ke and DPS, MVPS, BVPS, DY, HPR, Dt-1 and P/Et-1 are insignificant.

#### 4.2.12 Correlation between HPR and MVPS and other variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
HPR				.315										

Correlation between HPR and MVPS is considerable positive with 0.315 while the correlation between HPR and EPS, DPS, DPR, P/Et, BVPS, DY, Rt, ROE, G, Ke, Dt-1 and P/Et-1 are insignificant.

#### 4.2.13 Correlation between Dt-1 and EPS, MVPS and other variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
Dt 1	.869	.945		.813		.800	.719		.693				1	

Correlation between Dt-1 and EPS, MVPS, DY, ROE and BVPS is highly positive. Similarly, correlation between Dt-1 and DPS is extreme positive. On the other hand, correlation between Dt-1 and DPR, P/Et, Rt, G, Ke, HPR and P/Et-1 are insignificant.

#### 4.2.14 Correlation between P/Et-1 and EPS, MVPS and other Variables:

	EP S	DPS	DP R	MVPS	P/Et	BVP S	DY	Rt	ROE	G	Ke	HP R	Dt-1	P/Et- 1
P/Et -1	- .30 7			-.320		-.320			-.369					1

Correlation between P/Et-1 and EPS, MVPS, BVPS and ROE are considerable negative while the correlation between P/Et-1 and DPS, DPR, P/Et, DY, Rt, G, Ke, HPR and Dt-1 are insignificant.

### 4.3 Regression Analysis

This part of the chapter is divided into two sections, one is simple regression analysis and another is multiple regression analysis.

#### 4.3.1 Simple Regression Analysis

In this simple Regression analysis section, regression analysis has done having one independent variable for the dependent variable. For this, DPS, MVPS, EPS, g, ROE, Ke and HPR is analyzed as dependent variable. Before analysis of the regression model, variable as dependent and independent are inter into the SPSS program. The output result come from the program is tabulated on table 4.3.1 as per our requirement. Analysis of simple regression models are given below.

**Table 4.3.1 Simple & Regression Analysis**

Regression Model	No. of Obser	Constant (a)	Regression Coefficient (b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	't' Value	Significant
$D_t = a + b_t$	62	-13.761	.728	.054	.750	16.9019	13.433	**
$D_t = a + b D_{t-1}$	54	-.544	1.016	.049	.891	11.5796	20.650	**
$D_t = a + bP/E_{t-1}$	52	35.780	-.330	.176	.066	34.3595	-1.877	#
$P_t = a+bE_t$	60	327.304	9.697	1.113	.567	342.0194	8.716	*
$P_t = a+bD_t$	60	591.929	10.554	1.439	.481	374.3330	7.337	*
$P_t = a + bP/E_{t-1}$	53	998.133	-2.205	1.031	.082	513.8589	-2.138	#
$P_t = a + b(DPR)$	60	881.746	26.489	100.81 0	.001	519.4780	.263	#
$P = a + b(g)$	60	861.528	258.277	876.83 6	.001	519.3987	.295	#
$E_t = a + bD_{t-1}$	54	26.352	1.080	.086	.752	20.2499	12.556	**
$B_t = a + bE_t$	62	134.672	1.785	.144	.720	44.7959	12.419	**
$B_t = a+bDPR$	62	229.912	15.354	16.225	.015	84.0232	.946	#
$B_t = a + bD_t$	62	184.967	1.856	.742	.551	56.7415	8.575	*
$ROE = a + bE$	62	9.560 E-02	2.231 E-03	.000	.740	5.320 E-02	13.070	**
$ROE=a+bDPR$	62	.225	-4.36 E-03	.020	.001	.1043	-.217	#
$ROE = a + bD_t$	62	.164	2.116 E-03	0	0.47	7.593 E-02	7.302	*
$(g)=a+b(DPR)$	62	0.15	-5.75 E-02	0.013	0.25	6.752 E-02	-4.407	#
$(g) = a + bD_t$	62	0.142	-6.42 E-04	0	0.08	7.459 E-02	-2.255	#
$(g)= a + b(ROE)$	62	4.990 E-02	0.334	0.086	0.2	6.942 E-02	3.892	#
$K_e=a+b(DPR)$	60	0.172	-3.92 E-02	0.013	0.13	6.897 E-02	-2.926	#
$K_e = a + b(g)$	60	4.304 E-02	0.891	0.043	0.88	2.577 E-02	20.64	**

HPR=a+bD <sub>t</sub>	53	0.185	1.835 E-03	0.002	0.01	0.6164	0.753	#
HPR=a+b(DPR)	53	0.295	-0.131	0.12	0.02	0.6127	-1.093	#
HPR=a+bK <sub>e</sub>	53	-4.68	1.928	1.151	0.05	0.6034	1.676	#

\*\* 5% level of Significance at 1 degree of freedom (if 't' value is greater than or equal to 12.706. here, near to the point too).

\*10% level of significance at 1 degree of freedom (if't' value is greater than or equal to 6.314).

# Insignificant

#### 4.3.1.1 Regression Analysis for DPS on EPS

##### Regression Equation:

$$D_t = a + bE_t$$

Where,

D<sub>t</sub> = DPS (dependent variable)

E<sub>t</sub> = EPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R2	S.E. of Estimate	t' Value	Significance
62	-13.761	0.728	0.054	0.75	16.9019	13.433	Significant at 5% level of significance

The split table 4.3.1 above shows the regression analysis for DPS on EPS. From the 62 observed data, it is found that constant (a) is — 13.76 1 means the average DPS would not decrease below negative Rs. 13.76, even if average EPS became zero. Similarly, Regression coefficient (b) .728 shows that one rupee increases in average EPS leads to 73 paise increases the average DPS. On the other hand, R2 .728 shows the proportion of variation in DPS explained by regression model. Also, high proportion of R2 shows the model is well fits the population. The tabulated value of 13.433 which is above the calculated value of 't',12.706, at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence the estimated model is DPS -13.761 + .728 EPS

#### 4.3.1.2 Regression Analysis for DPS on DPS<sub>t-1</sub>

##### Regression Equation:

$$D_t = a + b D_{t-1}$$

Where,

$D_t$  = DPS (dependent variable)

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

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
54	-0.544	1.016	0.49	0.891	11.5796	20.65	Significant at 5% level of significance

The split table 4.3.1 above shows the regression analysis for DPS on last year DPS. From the 54 observed data, it is found that constant (a) is — .544 means the average DPS would not decrease below negative Rs. -.544, even if average Lagged DPS were zero. Similarly, Regression coefficient (b) 1.016 shows that one rupee increases in average Lagged DPS leads to 1 rupee 1 paisa increases the average DPS. On the other hand, R<sup>2</sup> .891 shows the proportion of variation in DPS explained by regression model. Also, high proportion of R<sup>2</sup> shows the model is well fits the population. The tabulated value of 't' 20.650 which is above the calculated value of 't', 12.706, at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $DPS = -.544 + 1.016 DPS_{t-1}$

#### 4.3.1.3 Regression Analysis for DPS on P/E<sub>t-1</sub>

##### Regression Equation:

$$D_t = a + bP/E_{t-1}$$

Where,

$D_t$  = DPS (dependent variable)

$P/E_{t-1}$  = Lagged **Price** earning ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
52	35.78	-0.33	0.176	0.066	34.3595	-1.877	Insignificant

The split table 4.3.1 above shows the regression analysis for DPS on last year P/F multiple. From the 52 observed data, it is found that constant (a) is 35.780 means the average DPS would not decrease below rupee 35.78 even if  $P/E_{t-1}$  multiple became zero. Similarly, Regression coefficient (b) -.330 shows that one time increases in Lagged P/E multiple leads to 33 paisa decreases the DPS. On the other hand,  $R^2$  .066 shows the proportion of variation in DPS explained by regression model. Also, high proportion of  $R^2$  shows the model is not fit the population. The tabulated value of 't' -1.877 which is not above or below the calculated value of 't', +/-12.706, at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant at 95 degree of confidence.

Hence, the estimated model is  $DPS = 35.78 - .33 P/F_{t-1}$   
 (but Insignificant, now average Mean DPS is 27.04)

#### 4.3.1.4 Regression Analysis for MVPS on EPS

##### Regression Equation:

$$P_t = a + bE_t$$

Where,

$P_t$  = MVPS (dependent variable)

$E_t$  = EPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	$R^2$	S.E.of Estimate	t' Value	Significance
60	327.304	9.697	1.113	0.567	342.0194	8.716	Significant at 10% level of significance

The split table 4.3.1 above shows the regression analysis for MVPS on EPS. From the 60 observed data, it is found that constant (a) is 327.304 means average MVPS of selected Banks would not decrease below rupee 327, even if average EPS became zero. Similarly, Regression coefficient (b) 9.697 shows that one rupee increases in average EPS leads to 9 rupee 70 paisa increases the average MVPS. On the other hand,  $R^2$  .567 shows the proportion of variation in MVPS explained by regression model. Also, moderate proportion of  $R^2$  shows the model is moderate well fits the population. The tabulated value of 't' 8.716 which is above the calculated value of 't', 6.314, at 10

% level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 90 degree of confidence.

Hence, the estimated model is average MVPS  $327.30 + 9.70 \text{ EPS}$

#### 4.3.1.5 Regression Analysis for MVPS on DPS

Regression Equation:

$$P_t = a + bD_t$$

Where,

$P_t$  = MVPS (dependent variable)

$D_t$  = DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
60	591.929	10.554	1.439	0.481	374.333	7.337	Significant at 10% level of significance

The split table 4.3.1 above shows the regression analysis for MVPS on DPS. From the 60 observed data, it is found that constant (a) is 591.929 means the average MVPS of selected Bank would not decrease below rupee 591.93 paisa, even if average EPS became zero. Similarly, Regression coefficient (b) 10.554 shows that one rupee increases in DPS leads to 10 rupee 55 paisa increases the MVPS. On the other hand, R<sup>2</sup> .481 shows the proportion of variation in MVPS explained by regression model. Also, moderate proportion of R<sup>2</sup> shows the model is moderate fit the population. The tabulated value of 't' 7.337 which is above the calculated value of 't', 6.3 14, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 90 degree of confidence.

Hence, the estimated model is average MVPS =  $591.93 + 10.55 \text{ DPS}$

#### 4.3.1.6 Regression Analysis for MVPS on P/E<sub>t-1</sub>

Regression Equation:

$$P_t = a + b P/E_{t-1}$$

Where,

$P_t$  = MVPS (dependent variable)



$P/E_{t-1}$  = Legged Price earning ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E.of Estimate	t' Value	Significance
53	998.133	-2.205	1.031	0.82	513.8589	-2.138	Insignificant

The split table 4.3.1 above shows the regression analysis for MVPS on last year P/E multiple. From the 53 observed data, it is found that constant (a) is 998.133 means the MVPS would not increase above rupee 998.13 paisa, even if P/Er became zero. Similarly, Regression coefficient (b) -2.205 shows that one time increases in Lagged P/E multiple leads to decrease the MVPS by 2 rupee 21 paisa. On the other hand, R2 .082 shows the proportion of variation in DPS explained by regression model. Also, very narrow proportion of R2 shows the model is not fit the population. The tabulated value of 't' -2.138 which is not above/below the calculated value of 't', +/- 6.3 14, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence.

Hence, the estimated model is average MVPS = 998.13-2.205P/E<sub>t-1</sub> (but Insignificant)

#### 4.3.1.7 Regression Analysis for MVPS on DPR

##### Regression Equation:

$$P_t = a + b (\text{DPR})$$

Where,

$P_t$  = MVPS (dependent variable)

DPR = Dividend payout ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E.of Estimate	t' Value	Significance
60	881.746	26.489	1.031	0.82	513.8589	-2.138	Insignificant

The split table 4.3.1 above shows the regression analysis for MVPS on DPR. From the 60 observed data, it is found that constant (a) is 881.746 means the MVPS would not decrease below rupee 881.75, even if DPR were zero. Similarly, Regression coefficient (b) 26.489 shows that if the proportion of DPR were 1, MVPS would be increased by 26 rupee 49 paisa. On the other hand, R2 .001 shows the proportion of variation in DPS explained by regression model. Also, negligence proportions of R2 shows the model is not fit the population. The tabulated value of 't' .263 which is far below the calculated value of 't',6.314, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence. Hence, the estimated model is average MVPS = 881.75 + 26.49 DPR

### 4.3.1.8 Regression Analysis for MVPS on g

#### Regression Equation:

$$P_t = a + b(g)$$

Where,

$P_t$  = MVPS (dependent variable)

$g$  = growth rate (independent variable)

No. of Observation	Constant (a)	Regression Coefficient (b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
60	881.746	26.489	1.031	0.82	513.8589	-2.138	Insignificant

The split table 4.3.1 above shows the regression analysis for MVPS on growth rate,  $g$ . From the 60 observed data, it is found that constant (a) is 861.528 means the MVPS would not decrease below 881 rupee 53 paisa, even if  $g$  were zero. Similarly, Regression coefficient (b) 258.277 shows that if the proportion of  $g$  were 1 (i.e., 100%), MVPS would be increased by 258 rupee 28 paisa. On the other hand, R<sup>2</sup> .001 shows the proportion of variation in MVPS explained by regression model. Also, negligence proportions of R<sup>2</sup> shows the model is not fit the population. The tabulated value of 't' .295 which is far below the calculated value of 't', 6.314, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence.

Hence, the estimated model is average MVPS = 861.53 + 258.28  $g$

### 4.3.1.9 Regression Analysis for EPS on D<sub>t-1</sub>

#### Regression Equation:

$$E_t = a + b D_{t-1}$$

Where,

$E_t$  = EPS (dependent variable)

$D_t$  = Lagged DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient (b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
54	26.352	1.080	.086	.752	20.2499	12.556	Significant at 5% level of significant

The split table 4.3.1 above shows the regression analysis for EPS on Last year DPS. From the 54 observed data, it is found that constant (a) is 26.352 means the EPS would not decrease below 26

rupee 35 paisa, even if Lagged DPS were zero. Similarly, Regression coefficient (b) 1.080 shows that if the amount of lagged DPS were increased by 1 rupee, average MVPS would be increased by 1 rupee 8 paisa. On the other hand, R<sup>2</sup> .752 shows the proportion of variation in DPS explained by regression model. Also, high proportions of R<sup>2</sup> shows the model is well fit the population. The tabulated value of 't' 12.556 which is near equal to the t- distribution table, 12.706, at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant even at 95 degree of confidence.

### 4.3.1.10 Regression Analysis for BVPS on EPS

#### Regression Equation:

$$E_t = a + b D_{t-1}$$

Where,

$B_t$  = BVPS (dependent variable)

$E_t$  = EPS (independent variable)

No. of Observations	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
62	134.672	1.785	.144	.720	44.7959	12.419	Significant at 5% level of significant

The split table 4.3.1 above shows the regression analysis for BVPS on EPS. From the 62 observed data, it is found that constant (a) is 134.672 means the EPS would not decrease below 134 rupee 67 paisa, even if EPS were zero. Similarly, Regression coefficient (b) 1.785 shows that if the amount of EPS were increased by 1 rupee, average BVPS would be increased by 1 rupee 79 paisa. On the other hand, R<sup>2</sup> .720 shows the proportion of variation in BVPS explained by regression model. Also, high proportions of R<sup>2</sup> shows the model is well fit the population. The tabulated value of 't' 12.419 which is near equal to the t-distribution table, 12.706, at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $BVPS = 134.67 + 1.79 EPS$

### 4.3.1.11 Regression Analysis for BVPS on DPR

#### Regression Equation:

$$B_t = a + b DPR$$

Where,

$B_t$  = BVPS (dependent variable)

DPR = dividend payout ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
62	229.912	15.354	16.225	.015	84.0232	.946	Insignificant

The split table 4.3.1 above shows the regression analysis for BVPS on DPR. From the 62 observed data, it is found that constant (a) is 229.912 means the BVPS would not decrease below 229 rupee

91 paisa, even if DPR were zero. Similarly, Regression coefficient (b) 15.354 shows that if the proportion of DPR were 1, average BVPS would be increased by 15 rupee 34 paisa. On the other hand, R2 .015 shows the proportion of variation in BVPS explained by regression model. Also, very narrow proportions of R2 shows the model is not fit the population. The tabulated value of 't' .946 which is far below to the t- distribution table, 6.314, at 10 % level of significance on 1 degree of freedom. That is. the slope of correlation is Insignificant even at 90 degree of confidence.

Hence, the estimated model is average BVPS = 229.91 + 15.34 DPR

#### 4.3.1.12 Regression Analysis for BVPS on DPS

Regression Equation:

$$B_t = a + b D$$

Where,

$B_t$  = BVPS (dependent variable)

$D_t$  = DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E.of Estimate	t' Value	Significance
62	184.967	1.856	.742	.551	56.7415	8.575	Significant at 10% level of Significance

The split table 4.3.1 above shows the regression analysis for BVPS on DPS. From the 62 observed data, it is found that constant (a) is 184.967 means the BVPS would not decrease below 184 rupee 97 paisa, even if DPS were zero. Similarly, Regression coefficient (b) 1.856 shows that if the proportion of DPS were increased by 1 rupee, average BVPS would be increased by 1 rupee 86 paisa. On the other hand, R2 .551 shows the proportion of variation in BVPS explained by regression model. Also, moderate proportions of R<sup>2</sup> shows the model is moderate fit the population. The tabulated value of 't' 8.575 which is above to the distribution table, 6.3 14, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant even at 90 degree of confidence.

Hence, the estimated model is average BVPS 184.97 + 1.86 DPS

### 4.3.1.13 Regression Analysis for ROE on DPR

Regression Equation:

$$ROE = a + b D_t$$

Where,

ROE = Return of Equity (dependent variable)

$D_t$  = DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E.of Estimate	t' Value	Significance
62	.164	2.116 E-03	.000	.471	7.593 E-02	7.302	Significant at 10% level of Significance

The split table 4.3.1 above shows the regression analysis for ROE on DPR. From the 62 observed data, it is found that constant (a) is .225 means the ROE would not above 22 percent, even if DPR were zero. Similarly, Regression coefficient (b) -.0043 6 shows that If the proportion of DPR were 1, ROE would be decreased by 0.44 percent. On the other hand, R<sup>2</sup> .001 shows the proportion of variation in DPS explained by regression model. Also, negligence proportions of R<sup>2</sup> shows the model is not fit the population. The tabulated value of 't' -.2 17 which is not above! below to the t-distribution table value, +/- 6.3 14, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence.

Hence, the estimated model is  $ROE = .225 + .004 DPR$

### 4.3.1.14 Regression Analysis for g on DPR

Regression Equation:

$$g = a + b (DPR)$$

Where,

g = growth rate (dependent variable)

DRP = dividend payout ration (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E.of Estimate	t' Value	Significance
62	.150	-5.75 E-02	.013	.245	6.752 E-02	- 4.407	Insignificance

The split table 4.3.1 above shows the regression analysis for g on DPR.. From the 62 observed data, it is found that constant (a) is .150 means the ROE would not above 15 percent, even if DPR were zero. Similarly, Regression coefficient (b) .05 75 shows that if the proportion of DPR were 1, g would be increased by 5.75 percent. On the other hand, R<sup>2</sup> .245 shows the proportion of variation in

g explained by regression model. Also, narrow proportions of  $R^2$  shows the model is not well fit the population. The tabulated value of 't' 4.407 which is well below to the t- distribution table value, 6.314, at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence.

Hence, the estimated model is  $g = .15 + .0575 \text{ DPR}$

#### 4.3.1.15 Regression Analysis for g on DPS

##### Regression Equation:

$$g = a + b D_t$$

Where,

g = growth rate (dependent variable)

$D_t$  = DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	$R^2$	S.E.of Estimate	t' Value	Significance
62	.142	-6.42 E-04	.000	.078	7.459 E-02	- 2.255	Insignificance

The split table 4.3.1 above shows the regression analysis for g on DPS. From the 62 observed data, it is found that constant (a) is .142 means the ROE would not below 14.2 percent, even if DPS were zero. Similarly, Regression coefficient (b) .000642 shows that if the amount of DPS increased by 1 rupee; g would be decreased by .06 percent. On the other hand,  $R^2$  .078 shows the proportion of variation in g explained by regression model. Also, narrow proportions of  $R^2$  shows the model is not well fit the population. The tabulated value of 't' - 2.255 which is not above! below to the t- distribution table value, +/- 6.3 14, at 10 % level of significance on 1 degree of freedom. That is, even at 90 degree of confidence.

Hence, the estimated model is  $g .142 + .0006 \text{ DPS}$

#### 4.3.1.16 Regression Analysis for g on ROE

##### Regression Equation:

$$g = a + b (\text{ROE})$$

Where,

g = growth rate (dependent variable)

ROE = return on equity (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	$R^2$	S.E.of Estimate	t' Value	Significance
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62	4.990 E-02	.334	.086	.202	6.942 E-02	3.892	Insignificance
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The split table 4.3.1 above shows the regression analysis for g on ROE. From the 62 observed data, it is found that constant (a) is .0499 means the g would not below 4.99 percent, even if ROE were zero. Similarly, Regression coefficient (b) .086 shows that if the proportion of ROE were 1 (cent percent), g would be increased by 33.4 percent. On the other hand,  $R^2$  .202 shows the proportion of variation in g explained by regression model. Also, narrow proportions of  $R^2$  shows the model is not well fit the population. The tabulated value of 't' 3.892 which is below to the t- distribution table value, 6.314, at 10 % level of significance on 1 degree .of freedom.

Hence, the estimated model is  $g = .0499 + .334 \text{ ROE}$

#### 4.3.1.17 Regression Analysis for Ke on DPR

Regression Equation:

$$E_e = a + b (\text{DPR})$$

Where,

$K_e$  = Cost of equity (dependent variable)

DPR = dividend payout ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	$R^2$	S.E.of Estimate	t' Value	Significance
60	.172	-3.92 E-02	.013	.129	6.897 E-02	- 2.926	Insignificance

The split table 4.3.1 above shows the regression analysis for  $K_e$  on DPR. From the 60 observed data, it is found that constant (a) is .172 means the  $K_e$  would not above 17.2 percent, even if DPR were zero. Similarly, Regression coefficient (b) -0.0392 shows that if DPR were increased by 1 percent,  $K_e$  would be decreased by 3.92 percent. On the other hand,  $R^2$  .129 shows the proportion of variation in  $K_e$  explained by regression model. Also narrow proportions of  $R^2$  shows the model is not well fit the population. The tabulated value of 't' -2.926 which is not above/below to the t- distribution table value, +/- 6.3 14, at 10% a level of significance on 1 degree of freedom. That is, the slope of correlation is Insignificant even at 90 degree of confidence. Hence, the estimated model is  $K_e = .172 - .0392 \text{ DPR}$

#### 4.3.1.18 Regression Analysis for Ke on g



### Regression Equation:

$$E_e = a + b (g)$$

Where,

$K_e$  = Cost of equity (dependent variable)

$g$  = growth rate (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
60	4.304 E-02	.891	.043	.880	2.577 E-02	20.643	Significant at 5% level of Significance

The split table 4.3.1 above shows the regression analysis for  $K_e$  on  $g$ . From the 60 observed data, it is found that constant (a) is .04304 means the  $K_e$  would not below 4.30 percent, even if  $g$  were zero. Similarly, Regression coefficient (b) .892 shows that if  $g$  were 1 (cent percent),  $K_e$  would be decreased by 89.1 percent. On the other hand,  $R^2$  .889 shows the proportion of variation in  $K_e$  explained by regression model. Also, high proportions of  $R^2$  shows the model is well fit the population. The tabulated value of 't' 20.643 which is well above to the t- distribution table value, 12.706 at 5 % level of significance on 1 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $K_e = .04304 + .891 g$

#### 4.3.1.19 Regression Analysis for HPR on DPS

### Regression Equation:

$$HRP = a + b D_t$$

Where,

HPR = one year holding return (dependent variable)

$D_t$  = DPS (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	R <sup>2</sup>	S.E. of Estimate	t' Value	Significance
53	.185	1.835 E-03	.002	.011	.6164	.753	Insignificance

The split table 4.3.1 above shows the regression analysis for HPR on DPS. From the 53 observed data, it is found that constant (a) is .185 means the HPR would not below 18.5 percent, even if DPS

were zero. Similarly, Regression coefficient (b) .001835 shows that if DPS were increased by rupee 1, HPR would be increased by .18 percent. On the other hand,  $R^2$  .011 shows the proportion of variation in HPR explained by regression model. Also, very narrow proportions of  $R^2$  shows the model is not fit the population. The tabulated value of 't' .753 which is far below to the t-distribution table value, 6.314 at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is insignificant even at 90 degree of confidence.

Hence, the estimated model is  $HPR = .185 + .001835 \text{ DPS}$

#### 4.3.1.20 Regression Analysis for HPR on DPR

##### Regression Equation:

$$HPR = a + b \text{ (DPR)}$$

Where,

HPR = one year holding return (dependent variable)

DPR = dividend payout ratio (independent variable)

No. of Observation	Constant (a)	Regression Coefficient(b)	S.E. of 'b'	$R^2$	S.E.of Estimate	t' Value	Significance
53	.295	-.131	.120	.023	.6127	-.1093	Insignificance

The split table 4.3.1 above shows the regression analysis for HPR on DPR. From the 53 observed data, it is found that constant (a) is .295 means the HPR would not above 29.5 percent, even if DPR were zero. Similarly, Regression coefficient (b) negative .131 shows that if DPR were 1, HPR would be decreased by 13.1 percent. On the other hand,  $R^2$  .023 shows the proportion of variation in HPR explained by regression model. Also, very narrow proportions of  $R^2$  shows the model is not fit the population. The tabulated value of 't' -.1093 which is not above or below the t- distribution table value, +7- 6.314 at 10 % level of significance on 1 degree of freedom. That is, the slope of correlation is insignificant even at 90 degree of confidence.

Hence, the estimated model is  $HPR = .295 - .131 \text{ DPR}$

#### 4.3.2 Multiple Regression Analysis

In this multiple Regression analysis section, regression analysis has done having two or more than two independent variables for the dependent variable. Multiple regression model with DPS, MVPS as dependent variable are analyzed. For this, DPS, EPS, lagged DPS, Lagged P/E multiple, ROE, g, Ke are taken as independent variables. Before analysis of the regression model, variable as dependent and independent are enter into the SPSS program. The output result come from the program is tabulated on table 4.3.2 as per our requirement. Analysis of simple regression models are given below.

**Table 4.3.2**

**Multiple Regression Analysis**

Regression Model	NO of Observation	Constant (a)	Regression Coefficient			R <sup>2</sup>	SEE	F	Degree of freedom	Significant
			(b <sub>1</sub> )	(b <sub>1</sub> )	(b <sub>1</sub> )					
D <sub>t</sub> = f(E <sub>t</sub> , D <sub>t-1</sub> )	54	-4.720	0.158	0.844	-	0.900	11.2346	228.621	2/51	**
D <sub>t</sub> = f(E <sub>t</sub> , D <sub>t-1</sub> , P/E <sub>t-1</sub> )	52	-5.335	0.161	0.849	1.185 E-02	0.905	11.1636	153.009	3/48	**
P <sub>t</sub> = F(D <sub>t</sub> , R <sub>t</sub> , P/E <sub>t-1</sub> )	52	393.756	10.871	9.111	-1.111	0.682	307.1598	34.252	3/48	**
P <sub>t</sub> = f(D <sub>t</sub> , ROE <sub>t</sub> , E <sub>t</sub> )	60	437.734	1.852	911.323	10.403	0.582	341.8848	26.022	3/56	**
P <sub>t</sub> = f(E <sub>t</sub> , DPR, g)	60	466.926	10.177	84.332	1041.379	0.585	340.6543	26.345	3/56	**

\*\* 5 % level of significance at given degree of freedom (if F is greater then or equal to the calculated value of F at particular digree of freedom table below).

**Calculation of the F-distribution at a 5% level of significance, α = .05**

Calculating - F at Numerator Denominator Degree of freedom		Pick up from F-distribution table				Calculation
		Degree of freedom	F-Distribution	Degree of freedom	F-distribution	
2/51	3.18	2/40	2.23	2/60	3.14	= 3.14 + (3.23 - 3.14)/20 * (60 - 51) = 3.18

3/48	2.81	3/40	2.84	3/60	2.76	= 2.76 + (2.84 - 2.76)/20 * (60 - 48) = 2.81
3/56	2.78	3/40	2.84	3/60	2.75	= 2.76 + (2.84 - 2.76)/20 * (60 - 56) = 2.78

#### 4.3.2.1 Regression Analysis for DPS on EPS and Lagged DPS

Regression Equation:

$$D_t = a + b_1E_t + b_2D_{t-1}$$

Where,

$D_t$  = DPS (dependent variable)

$E_t$  = EPS (independent variable)

$D_{t-1}$  = Lagged DPS (independent variable 2)

No of observation	Constant (a)	Regression Coefficient			R <sup>2</sup>	SEE	F	Degree of freedom	Significant
		(b <sub>1</sub> )	(b <sub>1</sub> )	(b <sub>1</sub> )					
54	-4.720	.158	0.844	-	0.900	11.2346	228.621	2/51	Significant at 5% level of significance

The split table 4.3.2 above shows the regression analysis for DPS on EPS and lagged DPS. From the 54 observed data, it is found that there is positive relationship of DPS with both EPS and lagged DPS. Further, constant (a) is minus 4.720 means the DPS would not below minus 4 rupee 72 paise, even if EPS and lagged DPS were zero. Regression coefficients b<sub>1</sub> .158 shows that if EPS increased by 1 rupee, DPS would be decreased by 16 paise. Similarly, b<sub>2</sub> .844 shows that if lagged DPS is increased by 1 rupee, DPS would be increased by 84 paise. On the other hand, R<sub>2</sub> .900 shows the proportion of variation in DPS explained by regression model, that is 90 % variation in DPS is explained by variation in EPS and lagged DPS. Also, very high proportion of R<sub>2</sub> shows the model is well fit the population. The tabulated value of F, 228.621 which is well above F- distribution table value, 3.18 at 5 % level of significance on 2/51 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $DPS = -4.720 + .158 EPS + .844 \text{ lagged DPS}$

#### 4.3.2.2 Regression Analysis for DPS on EPS, Lagged BPS and Lagged PIE multiple

Regression equation (taken from Deepak Chawla and G. Shrinivasan's study):

*Dividend Supply function,*

$$D_t = f(E_t, D_{t-1}, P/E_{t-1})$$

Where,

$D_t$  = Dividend per share

$E_t$  = Earning per share

$D_{t-1}$  = Lagged Dividend per share.

$P/E_{t-1}$  = Lagged price earning ratio.

$t$  = subscript for time.

Hence, regression equation is,

$$D_t = a + b_1 E_t + b_2 D_{t-1} + b_3 P/E_{t-1}$$

Where,

$D_t$  = DPS (dependend variable)

$E_t$  = EPS (independent variable 1)

$D_{t-1}$  = Lagged DPS (independent variable 2)

$P/E_{t-1}$  = Lagged P/E multiple (independent variable 3)

No of observation	Constant (a)	Regression Coefficient			R <sup>2</sup>	SEE	F	Degree of freedom	Significant
		(b <sub>1</sub> )	(b <sub>1</sub> )	(b <sub>1</sub> )					
52	-5.335	.161	.849	1.1851 .E-02	.905	11.1636	153.009	3/48	Significant at 5% level of significance

The split table 4.3.2 above shows the regression analysis for DPS on EPS and lagged DPS and lagged  $P/E$  multiple. From the 52 observed data, it is found that there is positive relationship of DPS with all EPS, lagged DPS and lagged  $P/E$  multiple. Further, constant (a) is minus 5.335 means the DPS would not below minus 5 rupee 34 paise, even if EPS, lagged DPS and lagged  $P/E$  multiple all were zero. Regression coefficients  $b_1$  .161 shows that if EPS increased by 1 rupee, DPS would be decreased by 16 paise. Similarly,  $b_2$  .849 shows that if lagged DPS is increased by 1 rupee, DPS would be increased by 85 paise. Similarly,  $b_3$  .01185 shows that if  $P/E_1$  increased by 1 times, DPS would be increased by 1 paise. On the other hand,  $R^2$  .905 shows the proportion of variation in DPS explained by regression model, that is 91 % variation in DPS is explained by variation in EPS, lagged DPS and lagged  $P/E$  multiple. Also, very high proportion of  $R^2$  shows the model is well fit the population. The tabulated value of F, 153.009 which is well above F- distribution table value, 2.81 at 5% level of significance on 3/48 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $DPS = -5.335 + .161 \text{ EPS} + .849 \text{ lagged DPS} + .0119 \text{ P/E}_{t-1}$

#### 4.3.2.3 Regression Analysis for MVPS on DPS, Retained Earning and $P/E_{t-1}$

Regression equation (taken from Deepak Chawla and G. Shrinivasan's study):

*Price function*

$$P_t = f(D_t, R_t, P/E_{t-1})$$

Where,

$P_t$  = Market price per share.

$D_t$  = Dividend per share.

$R_t$  = Retained earning per share

$P/E_{t-1}$  = Lagged price earning ratio.

$t$  = subscript for time.

Hence, regression equation is,

$$P_t = a + b_1 D_t + b_2 R_t + b_3 P/E_{t-1}$$

Where,

$P_t$  = MVPS (dependend variable)

$D_t$  = DPS (independent variable 1)

$R_t$  = Retained Earning per share (independent variable 2)

$P/E_{t-1}$  = Lagged P/F multiple (independent variable 3)

The split table 4.3.2 above shows the regression analysis for MVPS on DPS, Retained Faming, and lagged P/F multiple. From the 52 observed data, it is found that there is positive relationship of MVPS with DPS and retained eaming, R while the relationship is negative with lagged P/F multiple. Here, constant (a) is minus 393.756 means MVPS would not below 393 rupee 76 paisa, even if DPS and R were zero or would not decrease below the amount even if  $P/E_{t-1}$  were zero. Regression coefficients  $b_1$  10.871 shows that if DPS increased by 1 rupee, MVPS would be decreased by 10 rupee 76 paisa. Similarly,  $b_2$  9.111 shows that if R1 is increased by 1 rupee, MVPS would be increased by 9 rupee 11 paisa. Similarly,  $b_3$  minus 1.111 shows that if  $P/F_1$  increased by 1 time, DPS would be decreased by 1 rupee 11 paisa. On the other hand,  $R_2$  .682 shows the proportion of variation in MVPS explained by regression model, that is 68 % variation in MVPS is explained by variation in DPS,  $R_t$  and lagged P/E multiple. Also, very moderate proportion of  $R_2$  shows the model is moderate fit the population. The tabulated value of F, 34.252 which is well

above F- distribution table value, 2.81 at 5 % level of significance on 3/48 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $MVPS = 393.76 + 10.87 \text{ DPS} + 9.1 \text{ 1R}_t - 1.11 \text{ P/E}_{t-1}$

#### 4.3.2.4 Regression Analysis for MVPS on DPS, ROE and EPS

Regression equation (taken from Walter model)

$$P = \frac{DPS}{K} + \frac{n(EPS-DPS)}{K}$$

or,

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

Where,

P= Market price per share

DPS = Dividend per share

R = Internal rate of return, ROE

EPS = Earning per share

k = Cost of capital

Hence, Regression equation is,

$$P_t = a + b_1 D_t + b_2 ROE + b_3 E_t$$

Where,

$P_t$  = MVPS (dependent variable)

$D_t$  = DPS (independent variable 1)

ROE = return on equity (independent variable 2)

$E_t$  = EPS (independent variable 3)

No of observation	Constant (a)	Regression Coefficient			R <sup>2</sup>	SEE	F	Degree of freedom	Significant
		(b <sub>1</sub> )	(b <sub>2</sub> )	(b <sub>3</sub> )					
60	437.734	1.852	-911.323	10.403	.582	341.8848	26.022	3/56	Significant at 5% level of significance

The split table 4.3.2 above shows the regression analysis for MVPS on DPS, ROE, and EPS. From the 60 observed data, it is found that there is positive relationship of MVPS with DPS and EPS while the relationship is negative with ROE. Here, constant (a) is 437.734 means MVPS would not decrease below 437 rupee 73 paise, even if DPS and EPS were zero or would not increase below the amount even if ROE were zero. Regression coefficients b<sub>1</sub> 1.852 shows that if DPS increased by 1 rupee, MVPS would be decreased by 1 rupee 85 paise. Similarly, b<sub>2</sub> minus 911.323 shows that If ROE is increased by 1 percent, MVPS would be decreased by 9 rupee 11 paise. Similarly, b<sub>3</sub> 10.403 shows that if EPS increased by 1 rupee, MVPS would be decreased by 10 rupee 40 paise. On the other hand, R<sub>2</sub> .582 shows the proportion of variation in MVPS explained by regression model, that is 58 % variation in MVPS is explained by variation in DPS, ROE and EPS. Also, moderate proportion of R<sub>2</sub> shows the model is moderate fit the population. The tabulated value of F, 26.002 which is well above F- distribution table value, 2.78 at 5 % level of significance on 3/56 degree of freedom. That is, the slope of correlation is significant at 95 degree of confidence.

Hence, the estimated model is  $MVPS = 437.73 + 1.85 \text{ DPS} - 911.32 \text{ ROE} + 10.40 \text{ EPS}$

#### 4.3.2.5 Regression Analysis for MVPS on EPS, DPR and g

Regression equation (taken from Gardon model)

$$P = \frac{E(1-b)}{K-br}$$

Where,

P = price of the share

E = Earning per share.

B Retention ratio.

1-b = Percentage of earning distributed as dividend

E(1-b) = Dividend per share.

K = Capitalization rate or cost of capital

b.r. = Growth rate (multiple of retention ratio of earning, b and internal rate of return, r )

Hence, regression equation is,

$$P_t = a + b_1 E_t + b_2 \text{DPR} + b_3 g$$

Where,

P MVPS (dependent variable)

E<sub>t</sub> = EPS (independent variable 1)

DPR = dividend payout ratio (independent variable 2)

g = growth rate of firm (independent variable 3)



The split table 4.3.2 above shows the regression analysis for MVPS on EPS, DPR, and g. From the 60 observed data, it is found that there is positive relationship of MVPS with EPS while the relationship is negative with DPR and g. Here, constant (a) is 466.926 means MVPS would not decrease below 466 rupee 93 paisa, even if EPS were zero or would not increase below the amount even if DPR and g were zero. Regression coefficients  $b_1$  10.177 shows that if EPS increased by 1 rupee, MVPS would be decreased by 10 rupee 18 paisa. Similarly,  $b_2$  minus 84.33 shows that If DPR is increased by 1 percent, MVPS would be decreased by 84 paisa. Similarly,  $b_3$  104 1.379 shows that if g increased by 1 rupee, MVPS would be decreased by 10 rupee 41 paisa. On the other hand,  $R_2$  .585 shows the proportion of variation in MVPS explained by regression model, that is 59% variation in MVPS is explained by variation in EPS, DPR and g. Also, moderate proportion of  $R_2$  shows the model is moderate fit the population. The tabulated value of F, 26.345 which is well above F-distribution table value, 2.78 at 5 % level of significance on 3/56 degree of freedom.

# CHAPTER V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, conclusion is drawn from the study on the basis of study and analysis made in the previous chapters. This is the concluding part of the research, which is very important since this is an output of the research. Suggestions are provided to the sample banks so that they can improve them.

Every investor apparently expects handsome earnings on his/her share capital investment. The firm is not able to distribute fair dividend, will not be able to raise further equity capital from capital market. The total earning that a shareholder can give from share investment may be classified into dividend yield and capital gain yield. The company therefore needs to device a proper balance between retention and dividend distributions.

### **Summary and Conclusions**

The main objective of the research is to know whether the banks are following suitable policy or not. For the purpose of study, five banks are taken as the samples, which represent other commercial banks. Both analytical and descriptive models are used. The data are mostly secondary in nature. The collected data are analyzed using various financial and statistical tools. The analysis of DPR showed that the banks are not following stable dividend policy.

From the study it is found that none of the banks are following suitable dividend policy. Among the eight sample banks, only Standard Chartered Bank is paying dividend regularly. The DPS of SCBNL shows the increasing trend and has very good payout ratio in comparison to other sample banks. NIBL, SBIBL, NBBL and EBL are not paying dividend regularly. The NIBL is paying lowest percentage of earning as dividend. The regression analysis of DPS on MPS shows that increase in MPS leads to decrease in DPS in all the sample banks except in case of SBIBL. It is also found that change in dividend per share affects the value of shares differently in different banks.

So, the dividend policy followed by SCBNL is most appropriate in every aspect. The payout ratio is highest in case of SCBNL and the bank is paying dividend regularly. There is not much fluctuation in dividend payment. NBBL and EBL have followed most unsuitable dividend policy since the average payout ratios are lowest and the dividend payment is not irregular. There is no consistency in dividend payment in case of these banks. The dividend policy

followed by NIBL and SBIBL are not so satisfactory but better than that of NBBL and EBL. Their mean payout ratios and coefficient of variations are almost the same. So, on the basis of analysis of dividend policy of the sample banks, we can conclude that the dividend policy of the commercial banks in Nepal is not so satisfactory. Only one bank among the eight sample banks i.e. SCBNL is following quite satisfactory dividend policy. The remaining sample banks need to improve their dividend policy and follow more stable policy, which is favorable for the shareholders as well as the bank themselves. Government should also introduce new plans and policies in order to make the dividend policy more stable.

### **Recommendations**

1. The legal provisions of our country are not enough for protecting the shareholder's right. There must be some legal provisions so that the companies are compelled to follow stable dividend policy which is appropriate for the shareholders and the company itself.
2. The shareholders take the stability of dividend as the information about the company's profitability. So, company should follow stable dividend policy which conveys positive information about the company to the shareholders. If the dividend policy doesn't convey any information, then investors are compelled to think that the dividend policy of the firm's is erratic, which creates risk in the market. SCBNL shows stability and increasing trend in DPR which informs the investors that the company is expecting increased earnings the following year. So, the bank has a chance to acquire a good position in the market. But other sample banks do not show stability in dividend nor are they able to convey any information to the shareholders. NBBL is a greatest market risk. So, NBBL needs to improve the dividend policy the most.
3. The institutional investors are interested to invest in the companies with stable dividend policy. So, in this case institutional investors will certainly not be interested to invest in the sample banks, except SCBNL.
4. The Nepal Rastra Bank has issued the directives regarding the dividend payment and the bank has the right to take the action against companies not following the directives. But, there is no provision of stable dividend policy in the directives in which there is compulsion for the banks to follow the stable dividend policy.
5. Analysis of financial indicators shows that there is a high level of fluctuation in DPS, EPS, MPS, dividend yield and P/E ratio. Only SCBNL has a low coefficient of variation, which denotes that

there is consistency in dividend payment in case of SCBNL. So, others banks should also have consistency in dividend payment.

6. The average DPR is high in case of SCBNL and dividend is also paid regularly. But NBBL has lowest average payout ratio and irregular dividend payment. So NBBL need to improve the dividend policy. NIBL, SBIBL and EBL are almost same which is lower than SCBNL. So they should try to follow stable dividend policy which is favorable for shareholders and the bank.
7. The correlation analysis between EPS and DPS shows that there is insignificant relationship between EPS and DPS of NIBL, NBBL and EBL, which indicates that EPS is not considered in making dividend decisions. But it is very necessary to take EPS into account in making dividend decisions.
8. None of the banks have clearly defined policy which makes it difficult for the shareholders to make the decision regarding investing in the loans. So, the banks should formulate dividend policy which is suitable for the shareholders and banks themselves.
9. So, comparing the eight commercial banks, SCBNL is best in every respect and NBBL need to improve the dividend policy. Other banks also need to improve their dividend policy to attract the potential investors and acquire the good place in the market.
10. Since these eight sample banks represent all the commercial banks in Nepal, we can conclude that the commercial banks of Nepal are not following suitable dividend policy.

### Major Finding of The Study

- Comparative study on ROE of banks shows that SCBL has maximum ROE among the studied eight Banks with average 13 percent. Although, NABIL, HBL, NBB have moderate ROE with average 29,25,22 percent. Respectively, on the other hand BOK, EBL and IBL have comparatively less ROE with average 14,21 and 17 percent respectively.
- If we see the consistency percent retained by banks during studied eight years period, we will found that 30 has most inconsistent retained earning in FY 2004/05 that is the bank has paid dividend from last year retained earning. NBB has most consistent retained among the studied eight percent CV and NABL has comparatively more consistent retained earning with 18 percent CV
- On the presentation and analysis of cost of equity, the bank shows that NBB has the highest point 21 percent of average cost of equity among the eight studied banks while SBI has least, 10 percent. Although EBL and HBL have comparatively higher, more then overall point 19 percent each while BOK and IBL have comparatively less, 13 and 12 percent respectively, average cost of equity
- On the presentation and analysis of one year HPR of Banks. It show that mean HPR of eight year period for each bank, Standard Deviation (SD) and coefficient of variance (CV) of HPR for every year, mean of market average HPR, SD and CV of market average is calculated based on these eight Banks.

Allover HPR of these eight Banks over eight year period is 22 percent. FY 2002/03 is the year having maximum HPR with 105 percent while FY 2004/05 has least HPR with negative 47 percent. All of the Banks have negative HPR in FY 2004/05 with 73 percent negative return of SBI to 22 percent negative return of SCBL

From the all observation and study, it is find that none of the banks are following suitable dividend in the comparison of eight commercial banks. Only the standard chartered bank has paid dividend continuously the DPS of the SBNL shows the increasing trend and has very good payout ration in the comparison to others commercial bank. NIBL, SBIBL, EBL are not paying dividend regularly. The NIBL is paying lowest percentage of earning as dividend. It is also found that change in dividend per share effects the values of per share differently in different bank. The regression analysis of DPS on MPS shows that increase in MPS leads to decrease in DPS in all commercial banks. Except in case of SBIBL.

Show on the basis of analysis of dividend policy of the commercial bank we can conclude that the dividend policy of commercial bank in Nepal is not so satisfactory. Some of banks need to improve their dividend policy and follow more stable policy. Which is favorable for the shareholder as the bank them selves. Government should also formatting new policies and plans in order to make the dividend policy more stable.

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## APPENDIX – I

### EPS

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	49.17	-	50.66	21.29	44.5	69.33	129.61	113.31	68.27
2001/02	13.98	24.7	68.94	21.3	67.84	33.76	105.86	86.07	52.81
2002/03	41.74	39.29	<b>116.28</b>	34.84	83.79	53.68	115.62	83.08	<b>71.04</b>
2003/04	8.69	27.97	82.81	31.56	59.26	33.18	126.88	93.57	57.99
2004/05	9.61	2	18.27	32.91	55.25	33.59	141.13	60.26	44.13
2005/06	11.47	17.72	19.86	29.9	84.66	39.56	<b>149.3</b>	49.45	50.24
2006/07	14.26	27.5	<b>0.73</b>	45.58	92.61	51.7	143.55	49.05	53.12
2007/08	13.29	30.1	--	54.22	105.49	39.5	143.93	47.91	62.06
Mean	<b>20.28</b>	24.18	51.08	33.95	74.18	44.29	<b>131.99</b>	72.84	<b>57.46</b>
SD	15.79	11.71	41.16	11.28	20.79	12.9	15.32	24.61	9.2
CV	0.78	0.48	<b>0.81</b>	0.33	0.28	0.29	<b>0.12</b>	0.34	<b>0.16</b>

### DPS

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	20	0	15	0	30	50	70	50	29.38
2001/02	10	0	15	15	50	30	80	50	<b>31.25</b>
2002/03	15	0	0	0	55	25	100	50	30.63
2003/04	0	0	5	0	40	0	100	27.05	21.51
2004/05	0	10	0	0	30	0	100	25	20.63
2005/06	8	5	0	20	50	-20	110	1.32	26.79
2006/07	0	10	0	20	65	15	110	0	27.5
2007/08	0	15	0	0	70	12.5	120	11.58	28.64
Mean	6.63	5	<b>4.38</b>	6.88	48.75	19.06	<b>98.75</b>	26.87	<b>27.04</b>
SD	7.91	5.98	6.78	9.61	14.82	16.47	16.42	21.44	3.98
CV	1.19	1.2	<b>1.55</b>	1.4	0.3	0.86	<b>0.17</b>	0.8	<b>0.15</b>

### MVPS

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	440	<b>153</b>	252	-	430	<b>600</b>	840	755	<b>495.71</b>
2001/02	562	285	616	-	700	822	1162	1000	735.29
2002/03	562	998	<b>1502</b>	995	1400	<b>1401</b>	1985	1700	<b>1317.88</b>
2003/04	<b>1500</b>	850	1100	650	1500	1150	2144	1500	1299.25
2004/05	401	254	490	405	700	760	1575	1000	698.13
2005/06	<b>255</b>	198	360	445	740	795	1640	836	658.63
2006/07	307	295	354	680	1000	940	1745	840	770.13
2007/08	335	430	<b>265</b>	870	1505	800	<b>2345</b>	920	933.75

Mean	545.25	<b>432.9</b>	617.38	674.17	<b>996.88</b>	908.5	<b>1679.50</b>	1068.88	<b>863.59</b>
SD	401.64	316.17	451.19	231.03	420.45	253.89	498.76	342.46	300.24
CV	0.74	0.73	0.73	0.34	<b>0.28</b>	0.30	0.32	0.35	<b>0.35</b>

### P/E Multiple

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	8.95	-	<b>4.97</b>	-	9.66	8.65	6.48	<b>6.66</b>	<b>7.56</b>
2001/02	40.20	11.54	8.94	-	10.32	24.35	10.98	11.62	16.85
2002/03	13.46	25.40	12.92	28.56	16.71	26.10	17.17	<b>20.46</b>	20.10
2003/04	172.61	30.39	13.28	20.60	25.31	34.66	16.90	16.03	41.22
2004/05	41.73	127.00	26.82	12.31	12.67	22.63	11.16	16.59	33.86
2005/06	22.23	11.17	18.13	14.88	8.74	20.10	10.98	16.91	15.39
2006/07	21.53	10.73	<b>484.93</b>	14.92	10.80	18.18	12.16	17.13	73.80
2007/08	25.21	14.29	-	16.05	14.27	20.25	16.29	19.20	17.94
Mean	43.24	32.93	<b>81.43</b>	17.88	<b>13.56</b>	21.86	12.76	15.58	<b>28.34</b>
SD	53.52	42.20	178.06	5.89	5.42	7.39	3.74	4.43	21.28
CV	1.24	1.28	<b>2.19</b>	0.33	0.40	0.34	0.29	<b>0.28</b>	<b>0.75</b>

### BVPS

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	160.66	80.41	150.00	108.37	211.00	272.04	389.61	-	196.01
2001/02	164.22	96.33	207.00	122.61	224.00	273.63	282.26	-	195.72
2002/03	187.54	195.38	330.00	171.24	251.00	303.10	298.88	362.70	262.48
2003/04	165.73	207.72	248.00	144.57	216.00	275.96	327.50	240.19	228.21
2004/05	131.88	171.83	174.00	170.76	233.00	307.95	363.86	220.02	221.61
2005/06	134.03	192.52	190.00	150.10	267.00	216.24	403.15	247.81	225.11
2006/07	146.80	218.38	182.00	171.52	301.00	246.89	399.25	246.93	239.10
2007/08	159.54	213.60	-	219.87	337.00	200.80	422.38	239.59	256.11
Mean	<b>156.30</b>	<b>172.02</b>	<b>211.57</b>	<b>157.38</b>	<b>255.00</b>	<b>262.08</b>	<b>360.86</b>	<b>259.54</b>	<b>228.05</b>
SD	18.28	53.77	60.44	34.44	44.56	38.36	52.12	51.52	24.54
CV	<b>0.12</b>	<b>0.31</b>	<b>0.29</b>	0.22	0.17	0.14	0.20	<b>0.11</b>	<b>0.11</b>

### Dividend Yield

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	IIBL	Market Average
2000/01	0.05	0.00	0.06	-	0.07	0.08	0.08	<b>0.07</b>	0.06
2001/02	0.02	0.00	0.02	-	0.07	0.04	0.07	0.05	0.04
2002/03	0.03	0.00	0.00	0.00	0.04	0.02	0.05	0.03	0.02
2003/04	0.00	0.00	0.00	0.00	0.03	0.00	0.05	0.02	0.01
2004/05	0.00	0.04	0.00	0.00	0.04	0.00	0.06	0.03	0.02
2005/06	0.03	0.03	0.00	0.04	0.07	0.03	0.07	0.00	0.03
2006/07	0.00	0.03	0.00	0.03	0.07	0.07	0.00	0.03	0.03
2007/08	0.00	0.03	0.00	0.00	0.05	0.07	0.05	0.01	0.02
Mean	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.05</b>	<b>0.02</b>	<b>0.06</b>	<b>0.03</b>	<b>0.03</b>
SD	0.02	0.02	0.02	0.02	0.02	0.03	0.01	0.02	0.01
CV	<b>1.18</b>	<b>1.09</b>	<b>1.93</b>	1.60	0.32	1.10	0.02	<b>0.91</b>	<b>0.05</b>

### ROE

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.31	-	0.34	0.2	0.21	0.25	0.33	-	<b>0.27</b>

2001/02	0.09	0.26	0.33	0.17	0.3	0.12	0.38	-	0.24
2002/03	0.22	0.2	0.35	0.2	0.33	0.18	0.39	0.23	0.26
2003/04	0.05	0.13	0.33	0.22	0.27	0.12	0.39	0.39	0.24
2004/05	0.07	0.01	0.11	0.19	0.24	0.11	0.39	0.27	<b>0.17</b>
2005/06	0.09	0.09	0.1	0.2	0.32	0.18	0.37	0.2	0.19
2006/07	0.1	0.13	0	0.27	0.31	0.21	0.36	0.2	0.2
2007/08	0.08	0.14	-	0.25	0.31	0.2	0.34	0.2	0.22
Mean	<b>0.13</b>	0.14	0.22	0.21	0.29	0.17	<b>0.37</b>	0.25	<b>0.22</b>
SD	0.09	0.08	0.15	0.03	0.04	0.05	0.02	0.08	0.03
CV	<b>0.71</b>	0.57	0.66	0.14	0.15	0.30	<b>0.06</b>	0.30	<b>0.16</b>

### Growth (g)

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.18	-	0.24	0.20	0.07	0.07	0.15	-	0.15
2001/02	0.02	0.26	0.26	0.05	0.08	0.01	0.09	-	0.11
2002/03	0.14	0.20	0.35	0.20	0.11	0.09	0.05	0.09	0.16
2003/04	0.05	0.13	0.31	0.22	0.09	0.12	0.08	0.28	0.16
2004/05	0.07	-0.05	0.11	0.19	0.11	0.11	0.11	0.16	0.10
2005/06	0.03	0.07	0.10	0.07	0.13	0.09	0.10	0.19	0.10
2006/07	0.10	0.08	0.00	0.15	0.09	0.15	0.08	0.20	0.11
2007/08	0.08	0.07	-	0.25	0.11	0.13	0.06	0.15	0.12
Mean	0.09	<b>0.11</b>	0.20	0.17	0.10	0.10	0.09	0.18	0.13
SD	0.06	0.10	0.13	0.07	0.02	0.04	0.03	0.06	0.03
CV	0.65	<b>0.91</b>	<b>0.65</b>	0.43	0.20	0.43	0.35	0.34	<b>0.21</b>

### Ke

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	0.23	-	0.30	-	0.14	0.15	0.24	-	<b>0.21</b>
2001/02	0.04	0.26	0.28	-	0.15	0.05	0.16	-	0.16
2002/03	0.17	0.20	<b>0.35</b>	0.20	0.15	0.11	0.10	0.12	0.18
2003/04	0.05	0.13	0.32	0.22	0.12	0.12	0.13	0.29	0.17
2004/05	0.07	<b>-0.01</b>	0.11	0.19	0.15	0.11	0.18	0.19	<b>0.12</b>
2005/06	0.06	0.09	0.10	0.11	0.20	0.12	0.16	0.20	0.13
2006/07	0.10	0.11	0.00	0.18	0.16	0.16	0.15	0.20	0.13
2007/08	0.08	0.11	-	0.25	0.15	0.15	0.11	0.16	0.14
Mean	<b>0.10</b>	0.13	<b>0.21</b>	0.19	0.15	0.12	0.15	0.19	<b>0.16</b>
SD	0.06	0.08	0.14	0.05	0.02	0.04	0.04	0.06	0.03
CV	0.65	<b>0.66</b>	0.65	0.24	<b>0.15</b>	0.30	0.28	0.30	<b>0.19</b>

FY	SBI	BOK	NBB	EBL	NABIL	IBL	SCBL	HBL	Market Average
2000/01	-	-	-	-	-	-	-	-	
2001/02	0.30	0.86	<b>1.50</b>	-	0.74	0.42	0.48	0.39	0.67
2002/03	0.03	<b>2.50</b>	1.44	-	<b>1.08</b>	<b>0.73</b>	<b>0.79</b>	<b>0.75</b>	<b>1.05</b>
2003/04	<b>1.67</b>	-0.15	- 0.26	- <b>0.35</b>	0.10	- 0.18	0.13	- 0.10	0.11
2004/05	- <b>0.73</b>	<b>-0.69</b>	- <b>0.55</b>	- 0.38	<b>-0.51</b>	- <b>0.34</b>	<b>-0.22</b>	- <b>0.32</b>	<b>-0.47</b>
2005/06	- 0.34	-0.20	- 0.27	0.15	0.13	0.07	0.11	- 0.16	-0.06
2006/07	0.20	0.54	- 0.02	<b>0.57</b>	0.44	0.20	0.13	0.00	0.26
2007/08	0.09	0.51	- 0.25	0.28	0.58	- 0.14	0.41	0.11	0.20
Mean	0.17	<b>0.48</b>	0.23	<b>0.06</b>	0.36	0.11	0.26	0.10	<b>0.22</b>
SD	0.75	1.04	0.86	0.41	0.52	0.37	0.33	0.37	0.49
CV	4.32	2.15	3.80	<b>7.42</b>	1.42	3.39	<b>1.24</b>	3.79	<b>2.22</b>

## APPENDIX – II

For getting the actual results from the analysis, following are the main formulas that are being used in the study: -

### (i) Mean

$$\bar{X} = \frac{\sum X}{N}$$

Where,

$$\begin{aligned} \sum X &= \text{Sum of all observations} \\ N &= \text{number of observations} \end{aligned}$$

### (ii) Standard Deviation ( $\sigma$ )

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

### (iii) The Coefficient of Variation (C.V.)

$$\text{C.V.} = \frac{\sigma}{\bar{X}}$$

Where,

$$\begin{aligned} \sigma &= \text{Standard Deviation} \\ \bar{X} &= \text{Mean} \end{aligned}$$

### (iv) Probable Error

$$\text{P.E.} = 0.6745 \frac{\sqrt{1 - r^2}}{n}$$

(i) if  $r < \text{P.E.}$  it is insignificant, so perhaps there is no evidence of correlation.

(ii) if  $r > \text{P.E.}$  it is significant.

## APPENDIX – III

Calculation of Mean, Standard Deviation & CV of NABIL Bank in case of EPS

YEAR	X	X - X	(X - X) <sup>2</sup>
2000/01	44.40	-29.68	880.90
2001/02	67.84	-6.34	40.20
2002/03	83.79	9.61	92.35
2003/04	59.26	-14.92	222.61
2004/05	55.25	18.93	358.34
2005/06	84.66	-10.48	109.83
2006/07	92.61	18.43	339.66
2007/08	105.49	31.31	980.32
<b>Total</b>			3024.21

$$(i) \text{ Mean} = \frac{593}{8} = 74.18$$

$$(ii) \text{ Standard Deviation } (\dagger) = \frac{3024.21}{8} = 378.026$$

$$= 20.79$$

$$(iii) \text{ C.V.} = \frac{20.79}{74.18} = 0.28$$

\* Similarly, the Mean, SD & CV of all the banks can

