

# **CHAPTER - I**

## **INTRODUCTION**

### **1.1 Background of the Study**

The price of share is highly influenced by the company's dividend policy and the dividend decision itself is also affected by other financial variables as well the expected dividend of a company paying higher dividend is higher eventually the price of share of the company goes up but contradiction, a company paying higher cash dividends can suffer from the scarcity of funds for financing the corporate growth as a result the share price comes down. The effect of dividend policy on stock price is developed stock market has also been widely suited by finance scholars. They have stressed on the important of dividend behavior by corporate firms. So need has been felt to study and understand corporate dividend behavior and practices of corporate firms in developing stock market like Nepal.

Bank has always been the most important and the largest of financial intermediaries, almost everywhere. Nepal is enlisted in the list of the least developed countries of the world. Majority people here are engaged in their day to day survival various factors like landlocked situation, poor resource mobilization, lack of education as well as entrepreneurship, irrational government policy, political instability are responsible for the regarding pace of development in Nepal. Nepal is a country trying to develop its economy through global trend and of course with country suited economic liberalization. Development in the financial terms is the efficient flow and generation of the funds in the most productive sectors. In Nepal the growing influencing of economic liberalization and globalization first of all appeared in the form of Nepal's liberal policies in the banking sector. They encouraged the healthy competition in the financial sector as well as it allowed the entry of foreign banks in the Nepalese market in the form of joint venture banks. In other aspect, industrialization is an important factor for achieving the basic objective of country's economic and social progress. Now a day's industrialization is considered as an essential for the economic development of the country. It facilitates on effective mobilization of resource such as capital and skill.

The growth of commercial banks increased dramatically after the restoration of democracy when government adopted liberal and market oriented policy. There are 32 commercial banks in the country. This development has helped to mobilize the internal resources as well as the external funds of foreign investors for the economic development of the nation. The economic development history of Nepal has very slow track record .It has very short history of industrial development. Nepal has very short history of security market. It was in 1937 A.D when the history of security market began with the flotation of shares by the first industrial body of the country, Biratnagar Jute Mill Limited and the first commercial bank of Nepal, Nepal Bank Limited. In 1951 A.D Company Act-1951 was introduced followed by the issuance of government bond in 1964A.D for the first time. The security exchange centre limited was established in 1976A.D with the objective of facilitating and promoting the growth of capital market. Then it was the only capital market institution in the country undertaking the job of brokering underwriting managing public issues, market making for the government bond and other financial services.

In 1996 A.D the security exchange centre was converted into Nepal stock exchange (NEPSE) with the objective of providing free marketability and liquidity to the government and corporate securities by facilitating transactions in its own trading floor through the market intermediaries i.e. broker as well as market maker. Economic leaders at the present scenario are the countries which have been successfully collecting the wide spread funds and making investments in the good prospects. Capital market generates and liquidates securities as per requirements of the corporate groups.

Capital market is place where financial claims and obligations are bought and sold that have maturity period more than one year. Nepalese capital market has not efficient communication network even today. Even if capital market is in the early stage of development in Nepal, Nepalese investors have heavily made investment of newly established companies especially in the financial sector. It is hoped that Nepalese capital market will be moving towards efficiently in the days to come. It has made capital market less efficient and efficiency in results the risk. Even though, it is hoped that Nepalese capital market will be moving towards efficiency in the days to

come. In capital market all firms operate in order to generate earning, shareholders make investment in equity capital with the expectation of making earning either directly in the form of dividend or indirectly in the form of capital gains in future. The sole objective of each and every business is maximizing the shareholders wealth. Financial management is the heart of management and the numbers of decisions are made by the financial decision in order to run the company smoothly. The common stock represents ownership in a company. The common stocks are the permanent and vital sources of capital since they do not have maturity date. For the capital contributed by the shareholders by purchasing common stocks they are entitled to dividends. The amount or rate of dividend is fixed by the company's board of directors. Most of investors are wise to invest their saving funds in stocks, with the expectation of future cash inflow as dividend and maximization of value of their holding in the market. The dividend and value of the firm are linked with the earning power of the firm, which ultimately affects the market price of shares.

In the theory of finance, dividend decision plays a very vital role. Dividend decision however is still a crucial as well as controversial area of managerial finance. Dividend decision is one of three major decision of managerial finance. The relationship between dividend and value of firm is considered as the criterion for decision making. One of the major reason, people invest their hard money on the shares of any company is for dividend. The amount which distributed as dividend should be adequate to meet the normal expectations of the shareholders. The main controversy and agency problem between the shareholders and the management is the rate of dividend, because shareholders want more dividends and the management wants more amounts to retain in the company. Dividend policy decision is the major financial decision of the firm, which may affect the areas such as financial structure, flow of funds, stock price growth of firm etc. The dividend decision is the most controversial decision which requires a lot of expertise knowledge as well as the institution power in such decision maker. Dividends are payment made to shareholders from a firms earning in return to their investment. Whether those earning were generated in the current period or previous periods and policy refers to the decision about how much earnings at what form should be distributed. Thus dividend policy is to determine the

amount to be retained or reinvested in the firm. The objective of a dividend policy should be to maximize shareholders wealth position.

In the context of Nepal, people are interesting with the views and expectations of more capital appreciation and dividend on stocks. But there are not any consistency and regular practices of dividend announcement in different firm. Recently commercial banks and some other public limited companies have showed new trend of paying dividend to the shareholders. Price of stock usually fluctuates with references to the adequate information. No one can earn more in the efficiency and inefficiency is legally prohibited in order to regulate the security market in every nation. But being focused in this study, Impact of dividend on stock price, there should be discussion on different models and practices so as to conclude about the impact of dividend policy on stock price, Dividend policy and price of stock are always correlated. If a company pays dividend market price of stock increases and vice versa, but in some cases dividend decision may have no impact at all upon the price of stock i.e. market price of stock may remain constant or even decrease sometimes in response to the dividend distribution. Therefore information gap also plays vital role in the analysis of market price of stock.

Every firm after making profit either retain the money for further investment or distribute 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 retain earning or pay the dividend. “The dividend policy is the policy followed by the firm regarding the dividend versus retention decision.” (*Dangol; 2006:1*) The price of share is highly influenced by the company’s dividend policy and the dividend decision itself is also effected by other financial variables as well. Dividend policy may affect the areas such as financial structure of the firm funds flow, stock price, investors’ satisfaction, growth of firm etc. “Like other major decisions of the firm i.e. investment and financing decision the dividend decision has major role in any organization.” (*Regmi; 2006:2*).

According to duration effect and arbitrage affect the dividend yield and the payout ratio is the relevant measure. The rate of return effect implies that both dividend yield

and payout ratio matters. Dividend policy may serve as a proxy for growth and investment opportunities. After the establishment of joint venture companies there is a new trend of distributing dividends. Dividend distribution trend has not only attracted the investors but has also made the management conscious about the policy regarding the payment of dividend. The present study attempts to analyze the dividend behavior of the joint venture and other major commercial banks. It will also try to justify the dividend decision adopted by the banks and to relate them on the ground of similar fiscal period.

## **1.2 Profile of Selected Commercial Banks**

There are thirty two commercial banks in the country on 15<sup>th</sup> February, 2012 (including government owned, private and joint venture) due to time and resource factors it is not possible to study all of them regarding the study topic. Therefore, sampling will be done selecting from population.

Out of 32 commercial banks that are operating their activities in Nepal, we have selected 6 commercial banks for this study. So, we are going to analysis 6 commercial banks about their operating activities as a sample which is 18.75% of total commercial banks in existence.

### **I. Nabil Bank Limited**

Nabil Bank Limited (Nabil) the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 40 points of representation across the kingdom and over 170 reputed correspondent banks across the globe Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Operations of the bank including day-to-day operations and risk management are

managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Telebanking system.

## **II. Standard Chartered Bank limited**

Standard Chartered Bank Nepal Limited (SCBL) has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group having an ownership of 75% in the company with 25% shares owned by the Nepalese public. The Bank enjoys the status of the largest international bank currently operating in Nepal. Standard Chartered has a history of over 150 years in banking and operates in many of the world's fastest-growing markets with an extensive global network of over 1750 branches (including subsidiaries, associates and joint ventures) in over 70 countries in the Asia Pacific Region, South Asia, the Middle East, Africa, the United Kingdom and the Americas. As one of the world's most international banks, Standard Chartered employs almost 75,000 people, representing over 115 nationalities, worldwide. This diversity lies at the heart of the Bank's values and supports the Bank's growth as the world increasingly becomes one market.

With 18 points of representation, 23 ATMs across the country and with more than 350 local staff, Standard Chartered Bank Nepal Ltd. is in a position to serve its customers through an extensive domestic network. In addition, the global network of Standard Chartered Group gives the Bank a unique opportunity to provide truly international banking services in Nepal.

Standard Chartered Bank Nepal Limited offers a full range of banking products and services in Consumer banking, Wholesale and SME Banking catering to a wide range of customers encompassing individuals, mid-market local corporates, multinationals, large public sector companies, government corporations, airlines, hotels as well as the DO segment comprising of embassies, aid agencies, NGOs and INGOs.

Corporate Social Responsibility is an integral part of Standard Chartered's ambition to become the world's best international bank and is the mainstay of the Bank's values. The Bank believes in delivering shareholder value in a socially, ethically and environmentally responsible manner. Standard Chartered throughout its long history has played an active role in supporting those communities in which its customers and staff live. It supports non-governmental organisations involving charitable community activities. The Group launched two major initiatives in 2003 under its 'Believing in Life' campaign- 'Living with HIV/AIDS' and 'Seeing is Believing'.

### **III. Everest Bank limited**

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS), which enables their valued customers for operational any kind of transactions from any branches any where in the country.

With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, set up its representative offices at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

Joint Punjab National Bank (PNB), our joint venture partner (holding 20% equity in the bank) is the largest nationalized bank in India. With its presence virtually in all the important centers at India, Punjab National Bank offers a wide variety of banking services which include corporate and personal banking, industrial finance, agricultural finance, financing of trade and international banking. Among the clients of the Bank are Indian conglomerates, medium and small industrial units, exporters, non-resident Indians and multinational companies. The large presence and vast resource base have

helped the Bank to build strong links with trade and industry throughout the country.

#### **IV. Bank of Kathmandu Limited**

Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally. To achieve these, BOK has been focusing on its set objectives right from the beginning. To highlight its few objectives:

To contribute to the sustainable development of the nation by mobilizing domestic savings and channeling them to productive areas

- To use the latest banking technology to provide better, reliable and efficient services at a reasonable cost
- To facilitate trade by making financial transactions easier, faster and more reliable through relationships with foreign banks and money transfer agencies
- To contribute to the overall social development of Nepal

The vision of BOK is to become a significant contributor to the economic development of Nepal by distinguishing the bank as an efficient, competitive, safe and top quality financial institution. To offer financial services and becoming the "Bank of Choice" by dedicating to the progress and growth of the institution for the community, customers, employees, supervisors and stockholders by:

- Promoting economic growth and becoming a caring corporate citizen.
- Providing excellent customer services by offering personalized quality products and services.
- Inducing modern technologies of banking that adds value to customer service
- Following strict risk control mechanisms
- Enhancing shareholders value
- Providing challenging career and learning opportunities for employees



## **V. Siddhartha Bank Limited**

Siddhartha Bank Limited (SBL) commenced its operation on 24 December 2002 from Kathmandu. Since its establishment in 2002, the Bank has come a long way. The portfolio size of the Bank has been consistently growing each year. At the end of FY 2067-69(2010-11), deposit portfolio stood at Rs. 21.57 billion while the loan portfolio reached Rs. 18.64 billion. The net profit of the Bank stood at Rs. 311.4 million. This growth trajectory is expected to further up go with the infrastructure the Bank has been building up over the recent years. The Bank has installed a new state-of-the-art software FLEXCUBE, an Oracle Financial Services and Software (OFSS) product which is highly regarded worldwide and has been used by number of international banks. This technological platform supports the ever-widening branch and ATM networks that currently stand at 41 and 42 respectively. The branches have been strategically expanded to meet our existing customer value chain requirements and to penetrate into new customer segments.

Similarly, the Bank has established a dedicated payment solutions department to look into alternative delivery channels such as Card Services, Internet Banking, ATMs and Mobile Banking. With this set-up, the Bank has been able to delivery technologically driven products and services to its Customers.

Siddhartha Bank runs with a vision to be financially sound, operationally efficient and keep abreast with technological developments. The Bank desires to be one of the leading banks of the industry by fulfilling the interest of the stakeholders and also aims to provide total customer satisfaction by way of offering innovative products and by developing and retaining highly motivated and committed staff. It directs all its efforts to move ahead with increased profits. The following mission statement is a guide to meet the Vision of the Bank:

- Be one of the leading banks of the industry in terms of profitability, productivity and innovation.
- Aim at total customer satisfaction by rendering efficient and diversified financial services through improved technology.

- Build a highly motivated and committed team of staff by nurturing a good work culture to achieve superior individual performance aiming to enhance organizational effectiveness.
- Be the place of pride to all its stakeholders.

## **VI. Laxmi Bank Limited**

Laxmi Bank Limited (LAXMI) was incorporated in April 2002 as the 16th commercial bank in Nepal. In 2004 LAXMI merged with HISEF Finance Limited, a first generation financial company which was the first and ever merger in the Nepali corporate history. LAXMI is a Category ‘A’ Financial Institution and re-registered in 2006 under the “Banks and Financial Institutions Act” of Nepal. The Bank’s shares are listed and actively traded in the Nepal Stock Exchange (NEPSE).

LAXMI is technologically driven progressive Bank with strong risk and corporate governance foundations. It is known for its innovation and claim to many “firsts” in the Nepalese financial market. It is well known for its best asset quality among all financial institutions in the country and technology has been rated “Highly Secure” by an independent internationally accredited information system auditors.

It committed to excellence in delivery of entire gamut of financial services in order to achieve sound business growth and maximize stakeholder values by embracing team spirit, progressive technology and good corporate governance.

Its values are built around high standards of good corporate governance. Transparency, professionalism and high ethical tone at the leadership are foundations on which our actions are based. LAXMI’s Code of Conduct encapsulates international best practices applicable to Nepali context. The level of commitment of its people to take Laxmi Bank to greater heights has been a huge catalyst.

The visions of the bank are as follows:

- Provider of most integrated financial services
- Key player and a thought leader in the retail financial services
- A bank with the best asset book

- Best IT capability
- Preferred employer in the financial sector

S.No	Selected Banks	Abbreviation Used
1	NABIL Bank Limited	NABIL
2	Standard Chartered Bank Limited	SCBL
3	Siddhartha Bank Limited	SBL
4	Everest Bank Limited	EBL
5	Bank of Kathmandu Limited	BOK
6	Laxmi Bank Limited	LAXMI

### 1.3 Focus of the study

The study covers only the area of dividend distribution of selected commercial banks along with earning per share and price earning ratio and its impacts on market price. It focuses on the significance of the DPS, EPS, MPS, DPR, DY and P/E ratio by using various financial tools and statistical tools. The scope of the study base under procedure adopted in dividend distributed by selected sample banks.

### 1.4 Statement of the Problems

Dividend policy being one of the major decisions to be taken by firm has not become a well known phenomenon or a matter or practice to a larger number of financial communities even today. Since, long time back there has been heated controversy regarding relevancy and irrelevancy of dividend policy. Scholars have not been able to define simple and conclusive relationship between dividend policy and market price of the stock. Some experts stand with a belief that there is positive relationship between dividend distribution by a firm and its price of share where as at the same there are others who put upon their view against this. There is no relation at all in between dividend distribution and market price of stock. Walter's model and Gordon's model suggest relevant theory that reads dividend policy is an active variable that influences the value of firm measured in terms of market price per share. But Modigliani and Miller model advocates just contra to that done by Gordon and Walter.

In Nepal different companies seem to hold different policies regarding dividend. There are only few companies that have sufficient earnings and are capable to pay dividend every year. Dividend distribution does not match with the earnings of the companies. “The harder we look at the dividend picture the more it seems like a puzzle with pieces that just don’t fit together” (*Black and Scholes; 1971:352*) The capital market is an important part of corporate development of a country. Even though the capital market is in the early stage of development in Nepal, Nepalese investors have heavily made investment a newly established company especially in financial sector.

Dividend decision is crucial as well as controversial area of financial management. Besides it is not clearly understood by a larger segment of the financial community. No matter how many studies have been conducted in this regard the effect of dividend policy on a corporation’s market value has remained a subject of long standing controversy. The main focus of the study is to deal with the following problems;

1. What are the major factors affecting dividend policy of a bank?
2. Is DPS proportionate to the bank’s EPS?
3. What is the impact of dividend policy on market price of stock?
4. Is there any consistency in EPS, DPS, MPS and DPR of the sample banks?

### **1.5 Objectives of the Study**

The major objective of the study is to obtain the depth knowledge about the impact of dividend policy adopted by the banks to its market price of share as well as the overall valuation of the bank. The following are the specific objectives of this study.

- a. To explain the prevailing policies and practices regarding dividend in the Nepalese banks with reference to the sample bank.
- b. To analyze the uniformity and deviations if any in DPS, EPS, MPS and DPR of the sample banks.
- c. To find out the impact of divided policy on market price of stock

## **1.6 Significance of the Study**

The people are attracted to invest in shares for the purpose of getting more return as well as to maximize their wealth, so the dividend policy has become as effective way to attract new investors, to keep present investors happy and to maintain goodwill of the company. The important aspect of the dividend policy is to determine the amount of earnings to distribute to the shareholders and the amount to be retained in the bank. The financial manager must very carefully decide the allocation of earnings between dividends and retain earnings as this decision affects the value of firm. The objective in choosing dividend policy should be to maximize the value of the firm to its shareholders.

The dividend is most sensitive element in the area of investment in the common stock. If the market doesn't receive its expected dosage, stock price will suffer. Dividend payout of course reduce the amount of earning retain in the firm and affect the total amount of internal financing. The study may deliver crucial information for those respective commercial banks are made. The main significance of study is as follows;

1. The study aims to provide important and useful information to the investor.
2. It will be useful for the management.
3. It will useful for stock broker, financial agencies, policy makers and various stakeholders.
4. This study helps to formulate dividend policy to the policy maker while making their dividend policy.
5. This study will beneficial also to those parties who are directly or indirectly related to the financial institution.
6. This study covers the partial fulfillment of the requirement of MBS, T.U.

## **1.7 Limitations of the Study**

Dividend policy is the vital aspect of the financial management. For a corporate manager it is the most challenging and crucial part of the decision making process because it has the signaling effect towards market price of stock. This study has been carried out within certain limitations which are as follows.

- a. This study is based on especially on secondary data like annual reports of the banks under review, journals, unpublished as well as published thesis works other published articles and reports and related materials from various websites.
- b. Data taken for analysis covers only 5 years.
- c. The study covers only six commercial banks.
- d. The study only concentrate on dividend policy, it doesn't cover several other aspects of the commercial banks.
- e. The data of samples banks analyze with the use of limited tools and technique.

## **1.8 Organization of the Study**

The whole study has been classified into five chapters.

### **Chapter I: Introduction**

This chapter deals with the general idea about the study consisting background of the study, Statement of problem, Objective of the study, significance of the study, Limitation of the study and organization of the study.

### **Chapter II: Review of Literature**

This chapter deals with review of the different literature of the study field, therefore it includes conceptual framework along with the review of major books, journals, research works and thesis etc.

### **Chapter III: Research Methodology**

This chapter describes the research methodology with the matter and source of data population and sample of the model analysis, meaning and definition of statistical tools.

### **Chapter IV: Data Presentation and Analysis**

Analytical framework starts from this chapter. It contains presentation and analysis of the data using financial and statistical tools. Similarly this chapter also includes the major finding of the study so it is main part study.

### **Chapter V: Summary, Conclusion and Recommendation**

This chapter deals with suggestive framework, which is evocated to summary conclusion and recommendations.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study and what remain to be done. Review of literature is a way to discover what other researches in the area of problem has done and what has been left uncovered. This chapter deals with the reviewing of the different sources of dividend policy literature such as books, journals research works and unpublished thesis. Similarly this chapter includes two main heading like conceptual framework and review of related studies. Review of national and international studies and related theory to the dividend and dividend policy will absolutely help to this research.

#### **2.1 Conceptual Framework**

##### **2.1.1 Meaning of Dividend**

Companies that earn a profit can decide either of three ways: pay the profit out to shareholders, reinvest it in the business through expansion debt reduction or share repurchase or both. When a portion of the profit is paid out to the shareholders the payment is known as dividend. Dividend is paid in cash or stock. There is an ongoing debate about whether a company should payout its earnings as dividend or returns them for firm growth. There is further debate about which policy investors prefers. "Firms that are growing generally pay low or no dividends matures firms that are no longer in growth phase often pay high and increasing dividends." (*Gautam and Thapa; 2008:336*).

The dividend decision is regarded as a financing decision any cash dividend paid reduces the amount of cash available for investment by the firm. Dividend is periodic cash payments by the company to its shareholders. The dividend payable to the preference shareholders is usually filed by the terms of the issue of preference shares. But the dividend on equity share is payable at the discretion of the board of director of company. For payment of dividends a company must earn distributable profit from



which the actual payment of dividend will be made. A company in general meeting may declare dividends, but no dividend shall exceed the amount of recommended by the board. “The shareholders have no right to declare more dividend than what has been recommended by the board of directors.” (*Gautam and Thapa; 2008:336*)

“Dividend refers to that portion of firm’s net earning, which are paid to the shareholders.” (*Bhattra; 2002:12*) In theory of finance, dividend decision plays a very crucial role. Dividend decision however is still a crucial as well as controversial area of managerial finance. It is more technical area of finance and it is complex on having numerous implications for the firm.

In the other words dividend is a periodical payment made to shareholders to compensate them for the use of and risk to their investment. Higher the dividend means higher the immediate cash flows to investors, which is good but lower future growth for firms, which is bad. Thus how much of dividend is to be paid by corporate is decided by the board of directors. Before dividend is paid to common stockholders must be satisfied. Shareholders wealth includes not only market price of shares quoted in stock market but also current dividends. Thus dividend are more than just a means of distributing unused funds and dividend is the part of earning which distributed to the shareholders.

### **2.1.2 Meaning and Significance of Dividend Policy**

Dividend policy is the policy of any firm regarding the division of its profit between shareholders as dividend and retention for the profit making investment. “Dividend policy determines the division of earning between payments to stockholders and reinvestment in the firm, retained earning corporate growth, but dividends constitute the cash flows that accrue to stockholders” (*Wasten & Copeland; 1990: 657*). Management may decide retaining earning as opposed to paid out as dividends. The process of paying at “what’s left” to shareholders is called dividend policy. Dividend policy involves the decision to pay out earning versus retaining them for investment in the firm. Any change in dividend policy has both favorable and unfavorable effects on the firm’s stock price. Higher the dividends mean higher the immediate cash flows to investors, which are good but lower future growth, which is bad. The dividend

policy should be optimal which balances the opposing forces and maximizes stock price.

The decision to keep some portion of earning or pay some portion of earning as dividend is dividend policy. Dividend policy involves the decision to payout earning versus, retaining them, for reinvestment in the firm. The policy of company on the decision about the allocation of its profit between shareholders is term as dividend policy. The dividend policy includes all aspects related to the payment of dividend. There is inverse relationship between cash dividend and amount retained. In other words, if retained earnings are kept more by the company less will be dividend and vice versa. The dividend policy adopted by the firm should be such that it strikes a proper balance the financing decision and investment decision. The dividend policy should be optimal which balances the opposing forces and maximizes stocks price. Dividend policy may have a critical influence on the value of the firm. “The value of the firm is a function of its dividend payment ratio, the dividend policy will affect directing the firm’s cost of capital.” (*Gautam and Thapa; 2008:339*)

A company which wants to pay dividends and also needs funds to finance its investment opportunities will have to depend on external source of finance such as issuing debentures and equity shares. Dividend policy of the firm they affects both long-term financing and the wealth of shareholders. Dividend policy which involves returning of earning is a long term financing decision related to management of capital structure of the firm. In view of this management should decide policy carefully. So that the net earnings are divided between dividend and retained earnings in an optimum way to achieve the objective of maximization the wealth of shareholders. “A firm’s decision regarding the size of dividends it will pay to its shareholders is called dividend policy” (*Gautam and Thapa;2008:340*).

### **2.1.3 Dividend Policy and Market Price of Share**

MPS is that value which can be obtained by a firm from the market. Market value is one of the variables which are affected by the dividend per shareholders earning per share of the firm. If the earning per share and the dividend value is high the market per share will also be high market value of share may be high or low than book value.

If the firm is growing concern and its earning power is greater than the cost of capital the market value of share the share will be higher than the book value. If the firm's earning capacity is lower than cost of capital MPS will also be lower MPS is determined by capital market. Market price of stock usually fluctuated by the adequate information. No one can earn more in the inefficiency and ineffectiveness' is legally prohibited in order to regulate the security in every nation. But being focused is this study, dividend policy and its impact on market price of stock there should be discussion on different models and practices, which have significant effects in MPS or not. So MPS and security valuation are integral parts. Without valuation no one can quote the price and without price there is no chance of trading. Market price of the stock (MPS) is the trading price of the stock listed in authorized of legal stock exchanges. Dividend policy and MPS has always correlation, if the company pays dividend and the MPS increases and vice versa. But in some cases out of this interrelation, the price may remain constant of decrease too. Therefore the information lack or flow is also vital in the analysis of MPS. "In the context of Nepal, MPS is the price is quoted for purchasing or selling under Nepal stock exchange Act or related laws and regulation on the stock exchange floor." (*Adhikari; 2008:16*)

Greater the perfection aviating in the stock market the highest will be relevancy of dividend policy over the market price. The cash dividend of the normal firm will have significant effect on the market price since the company is viewed as a firm of the future prospect and growth. The following framework will clear the relationship between the variable:

<b>Independent Variable</b>	<b>Dependent Variable</b>
Cash Dividend	Market Price of Share
Stock Divided	
Earning Per Share	
Net Worth	

"Share variable is an economic process which generates rational securities prices. Although the price fluctuation may appear to be chaotic, they are random arrival the new information" (*Francis;1990: 207*).

### **2.1.4 Theories of Dividend**

There are two fundamental theories of dividend;

#### **A. Residual Theory**

Residual theory of dividend suggest that the first priority should be given to the profitable investment opportunities, if there are any profitable opportunities the firm invites in those and the only the residual (remaining) amount of earnings ( if any) would be distributed to the shareholders. Under this theory the firm first determines the optimum level of investment opportunity schedule (IOS) and weighted average cost of capital (WAAC). Using the optimum capital structure proportion, the firm estimates the investment opportunities. Since the cost of internal equity (retained earnings is less than the cost of new common stock to meet the equity financing requirement. If retained earnings are not sufficient to meet the requirement, new common stock are to be sold. Any retained earnings left this would be distributed as dividend.

#### **B. Wealth Maximization Theory**

Larger dividend is announced and distributed to shareholders under this theory in order to maximize their wealth this theory is generally adopted by the newly established and declining companies to up keep its image and retain the shareholders' positive attitude towards the company stock.

### **2.1.5 Payment Procedure of Dividend**

Company makes dividend decision with considering number factors. Now, how does the company distribute such dividend? Dividend includes a systematic process and every company follows it. The process includes different dates and such are declaration date, holder (Shareholder) of record date, ex-dividend date and payment date.

#### **a) Declaration Date**

Managers manage the company. However, the crucial decision is made by the representative of the shareholder and those are called board of directors. Board of directors controls the firm. Board of directors meet and with the help of the

management, declares dividend what the company is going to distribute. Thus this is the date on which the board of directors declares the dividend. At this time they set the amount payment of the dividend of paid.

**b) Holder of Record Date**

It is a date until which a person who has bought shares before ex-dividend date, must register his/her name in the company. Holder of record date is a final date to transfer the title, meaning that the sellers' name should be replaced by the buyer's name in the company's register till this date.

**c) Ex-Dividend Date**

This date is four days prior to the record date. Share purchased after the ex-dividend date are not entitled to the dividend.

**d) Payment Date**

It is the date on which company starts to pay dividend.

**2.1.6 Major Forms of Dividend**

Depending upon the objective and policies, the firm can give various type of dividend to the shareholders. Before adoption and dividend, the firm must ensure the smooth growth of the shareholders. "There should be consistency in dividend policy and financial plans, shareholders preference and attitude of the directors." (*Bhattraï; 1996:24*)

The corporations in Nepal are in the early stage of development due to which they need to pay extensive concentration in the dividend. The empirical observation in case of public limited companies in Nepal shows that only few corporations are paying dividend to the government due to suffering from regular losses and not having risk of ownership transfer. Some of the major forms of dividends the corporation can adopt are discussed below.

### **A. Cash Dividend**

Cash dividend is the dividend, which is distributed to the shareholders is cash out of the earnings of the company. When cash dividend is distributed both total assets and net worth of the company decrease as cash and earnings decrease. The market price of the share drops in most cases by the amount of the cash dividend distributed. The market price after cash dividend is calculated as follows:

Market Price Per Share After Cash Dividend = Market Price Per Share Before Cash Dividend – Dividend Per Share

Cash dividend has the direct impact on the shareholders. It is one of the most interesting matters of the study and the volume of the cash dividend depends up on earning of firms and on the psychological value for stockholders. Cash and everyone like to collect their return in cash rather than non-cash means. So cash dividend is not only a way to earning distribution but also a way of perception improvement the capital market. The objectives of the cash dividend are;

- To distribute the earning to shareholders as they hold the proportion of the shares.
- To build and image in the capital market so as to create favorable condition to raise the fund at the needs.
- To make distribution easy and to account easily.

### **B. Stock Dividend**

A stock dividend occurs when the board of directors authorizes a distribution of common stock to existing shareholders. Stock dividend increases the number of outstanding share of the firm's stock. Although stock dividends do not have a real value, firms pay stock dividend as a replacement for a supplement to cash dividend. Stock dividend requires an account to the common stock and paid in capital account.

Rupees Transferred from Retained Earnings = Number of Share Outstanding × Percentage of Stock Dividend × Market Price of the Stock

There is no cash involved in a stock dividend. Net worth remains unchanged and the number of shares in increased. With a stock dividend, retained earnings decrease but

common stock and paid in capital on common stock increase by the same total amount. Therefore, issue of stock dividend has no change in stockholders, wealth. Stock dividend increase the share held, but the proportion of the company each stockholder owns remains the same.

$$\text{Market Price Per Share After Stock Dividend} = \frac{\text{Stock Price Before Stock Dividend}}{1 + \text{Stock Dividend in Fraction}}$$

### **C. Stock Split**

A stock split (also known as straight stock split) is essentially when a company increases the number of shares. In case of stock splits, a company may double, triple or quadruple the number of shares outstanding. The market price of each shares of merely lowered; economic reality does not change at all. It is, therefore completely irrational for investors to get excited over stock splits.

The effect of a stock split is an increase in the number of shares outstanding and a reduction in the par or stated value of share. The total net worth of the firm remains unchanged. The stock split does not involve and cash payment only additional certificates representing new shares.

### **D. Reverse Split**

A method that is used to raise the market price of a firms stock by exchanging certain number of outstanding shares for one new shares of stock is reverse split. The effect of a reverse split is a decrease in the number of shares outstanding and an increase in the par, or stated, value of shares. The total net worth of the firm remains unchanged. The reverse split does not involve any cash payment, only additional certificates representing new shares. Reverse split is used to stop the market price per share below a certain level.

### **E. Bond Dividend**

Bond is a payment of dividend by the corporation if the form of bone to the shareholders. In other words, the corporation declares dividend in the form of its own bond with a view of avoiding cash out flow. Bond dividend does not change its liquidity position.

## **F. Scrip Dividend**

A dividend paid in promissory notes is called scrip dividend. When earning of the firms justify dividend but the company's cash position is temporarily weak and does not permit cash dividend. It may declare dividend in the form of scrip dividend may bear a definite maturity date or it may be left to the directors such dividends may be interest bearing or non-interest bearing.

## **G. Interim Dividend**

Generally dividend is declared in the last of financial year. This is called a regular dividend. Many times directors can declare the dividend the before the end of the financial year, this called interim dividend.

### **2.1.7 Dividend Payout Schemes**

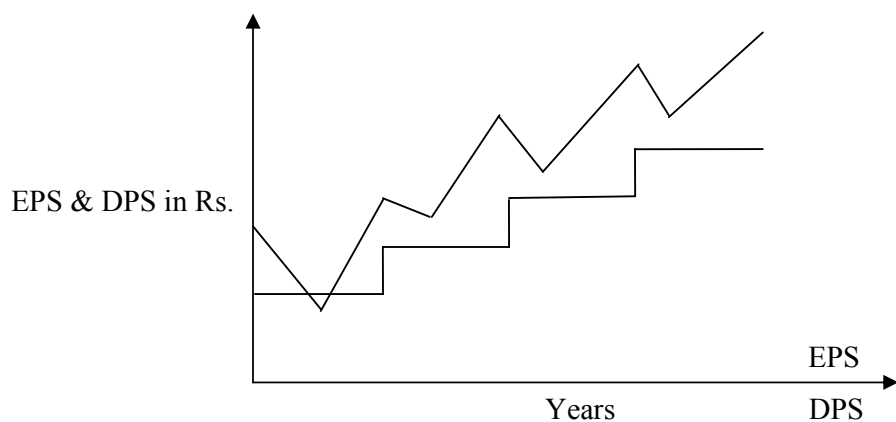
Stability of regular of dividends is considered as a describe policy by the management of companies. Most of the shareholders also prefer stable dividend because all other things being the same, stable dividends have a positive impact on the market price of the share. By stability preferable one that is upward sloping. Three of the commonly used dividend policies are;

#### **a. Constant Dividend Per Share**

Constant dividend policy is based on the payment of a fixed rupee dividend in each period. A number of companies follow the policy of paying fixed amount per share as dividend every period, without considering the fluctuation in the earning of the company. This policy does not imply that the dividend per share or dividend rate will never be increased. When the company reaches new level of earning and expects to maintain it the annual dividend per share may be increased. Investors who have dividends as the only source of their income prefer the constant dividend policy.



**Figure 2.1**  
**Constant Dividend Per Share**

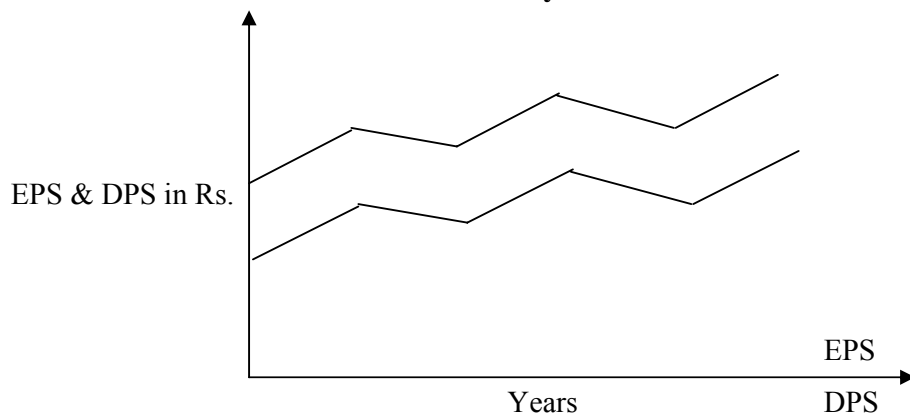


Above figure shows that earnings may fluctuate from year to year but dividend per share remains relatively stable over the years and it increases along with the increase in earnings.

**b. Constant Payout Ratio**

The ratio of the dividend to earnings is known as the dividend payout ratio. When a fixed percentage of earnings is paid as a dividend in every period, the policy is called a constant payout ratio. For example, if the dividend payout ratio is 50 percent, the firm always pays 50 percent of its annual earnings as a dividend. Since earnings fluctuate, following this policy necessarily means that the rupee amount of the dividend will fluctuate. It ensures that dividends are paid when profits are earned and avoided when the firm incurs losses.

**Figure 2.2**  
**Constant Payout Ratio**



### **C. Low Regular Dividend Plus Extras**

The policy of paying a low regular dividend plus extras is a compromise between a stale dividend (or stable growth rate) and constant payout rate. Such a policy gives the firm flexibility, yet investors can count on receiving at least a minimum dividend. It is often followed by firms with relatively volatile earnings forms year to year. “The low regular dividend can usually be maintained even when excess funds are available.”  
(*Gautam and Thapa; 2008:339*)

#### **2.1.8 Factors Affecting Dividend Policy**

Dividend policy is concerned with deciding the part of profit to be distributed to the share holder. Many considerations may affect a firm’s decision about its dividends, some of them are unique to that company and some of the more general consideration is given subsequently, they are as follows;

##### **a. Size of the Earnings**

A firm that has high level of earning will generally pays a larger portion of its earnings in dividends. If the size of earning is small a smaller amount of the profit may be distributed to shareholders. Thus, size of earnings affects the dividend policy of the firm.

##### **b. Investment Opportunity**

The available profitable investment opportunities of firm affect the dividend decision,. If the company has lot of such opportunities, it needs excess fund to finance. So, the company retains more profit paying fewer amounts as dividend.

##### **c. Liquidity Position**

The cash or liquidity position of the firm influences its ability to pay dividend. A firm may have sufficient retained earnings, but if they are invested in fixed assets, cash may not be available to make dividend payment. Thus the company must have adequate cash available as well as retained earning to pay dividends.

#### **d. Legal Rules**

Certain legal rules may limit the amount of dividends a firm may pay. These legal constraints fall into two categories, first, statutory restrictions may prevent a company from paying dividend. While specific limitations vary by state, generally a corporation may not pay a dividend (i) If the firm's liabilities exceed its assets, this provision is known as 'the insolvency Rule' (ii) If the amount of the dividend exceeds the accumulated profit (retained earning), this legal provision is known as the 'Net Profit Rule' (iii) If the dividend is proposed from capital invested in the firm, this provision is also known as 'The capital impairment rule.' The second type of legal restrictions is unique to each firm and results from restriction debt and preferred stock contracts.

#### **e. Desire of Shareholders**

Shareholders may be interested either in dividend incomes or capital gains. Wealthy shareholder in a high income tax bracket may be interested in capital gains as against current dividends. A retired and old person, whose source of income is dividend, would like to get regular dividend.

In a closely held company, management usually knows the desires of shareholders. So they can easily adopt a dividend policy that satisfied all customers. But in widely held company, number of shareholders is very large and they have diverse desires, regarding dividends and capital gains some shareholders want cash dividends, while other prefer bonus share.

#### **f. Growth Prospects**

A rapidly growing firm usually has a substantial need of funds to finance the abundance of attractive investment opportunities. Instead of paying large dividends and then attempting to sell new shares to raise the equity investment capital it need. This type of firm usually retains larger portions of its earnings and avoids the expense and inconvenience of public stock offerings

**g. Need to Repay Debt**

The need to repay debt also influences the availability of cash flow to pay dividend. If the company has to repay the debt in the current year needs more fund and retains more profit paying fewer amounts as dividend.

**h. Restriction in Debt Contracts**

Restriction in debt contract may specify that dividends may be paid only out of earnings generated after. Signing the loan agreement and only when net working capital is above a specified amount. Also, preferred dividends take precedence to common stock dividends.

**i. Rate of Assets Expansion**

A high rate of asset expansion creates a need to retain funds rather than to pay dividends.

**j. Stability of Earning**

A firm that has a stable earnings trend will generally pay a larger portion of its earnings in dividends. If earnings fluctuate significantly, a larger amount of the profits available for investment projects when needed.

**k. Profit Rate**

A high rate of profit on net worth makes it desirable to retain earnings rather than to pay out if the investor will earn less on them.

**l. Control**

For many small firms and certain large ones, maintaining the controlling vote is very important. These owners would prefer the use of debt and retained profit to finance new investments than issue new stock. As a result dividend payout will be reduced.

**m. Access to the Capital Markets**

A firm's access to capital markets will be influenced by the age and size of the firm, therefore a well-established firm is likely to have a higher payout ratio than a smaller, newer firm.

## **2.2 Legal Provision Regarding Dividend Practices in Nepal**

There are some legal provisions in company Act of Nepal regarding the dividend payment. The responsibility to protect shareholders' interest is handed to stock exchange centre by the security exchange Act 1983-1984 AD. Only this is not enough to protect shareholders interest because the attitude of board of directors plays dominant role in public limited companies. In many cases, long term debt debentures and preferred stock agreements contain restrictions on the maximum common stock dividend that can be paid by a firm such covenants are designed to protect senior claimholder from executive withdrawals by real owners. Dividend is paid only out of certain earnings. In present situation, it is advisable to intact separate shareholders protection act safe guard shareholders right as an interest. Shareholders association of Nepal has been established for the purpose. The responsibilities to undertake required action to protected shareholder interests was given to SEC by security exchange Act 1983-1984. Recently, Nepal government has issued company Act 2063. The Act marks some legal provision for dividend payments, those provisions are as follow;

### **Section 179**

Subsection-1 of section 179 states that the company can issue the bonus share from its portion of dividend after passing special resolution by the general meeting.

Subsection-2 of section 179 states that company should inform to the office before issuing the bonus shares.

### **Section-182**

Subsection-1 of section 182 states that dividend should be distributed within 30 days from the decision dividend distributed except the following circumstances.

- In case of any law forbids the distribution of dividend
- In case the right to dividend disputed.
- Incase dividend cannot be distributed within the time limit mentioned about owing to circumstances any one control and without any fault on the part of company. The company can distributed the dividend after taking the prior consent if Nepal government holds fall or parties ownership of the company.

- In case dividends are not distributed within the time limit mentioned in the subsection-1 dividend and extra interest should be distributed.

Only the person whose name stands shall be entitled to get dividend. In addition to this, the company Act 2063 makes other provision regarding dividend and interim dividend payments. The company Act 2063 has made a new provision prohibited by the provision company Act-2053.

### **Section-61**

The section states that no company shall purchase its own shares or supply loans against the security of its own shares. In the following circumstances the company can purchase its own shares from its retained earnings to be distributed as dividend.

- If all amount against shares issued by the company is paid.
- If issued shares of public company is registered in security board.
- If there is provision regarding the purchase of own share in the article of association of respective company.
- If the special resolution is passed by the general meeting of respective company regarding the purchase its own shares.
- If loan amount of the company shall not be doubled by its capital reserve funds after purchasing its own shares.
- If the purchased own share amount will not exceed by 20% of company's total paid-up capital and general reserve funds.
- The direction of the office issued by time will not be against.
- Regarding the purchase of own shares will not be against the directing of the office.
- Other provision also has been made in the company Act 2063 regarding the purchase of its own share.

### **2.3 Review of Major International Studies**

There have been so many studies made by the different persons and institution for dividend policy and stock price. There are two opinions regarding to dividend payout and market price of stocks. One point of views is that dividends are irrelevant and the

amount of dividend payout does not affect the market relevant and the amount of stocks. Always a critical and confused question has arisen, whether dividend policy affects the market value of the shares or not. To put light in these matter different studies made by different international scholars and researchers are going to be discussed below.

**a) Modigliani and Miller's Model (1961)**

Modigliani and Miller have propounded the MM hypothesis to explain the irrelevance of a firm's dividend policy. This model was based on a few assumptions, sidelined the importance of the dividend policy and its effect on the share price of the firm. According to the model it, it is only the firm's investment policy that will have an impact on the share value of the firm and hence should be given more importance.

The assumption of this model is:

- The essence of a perfect market is that all investors are rational. In perfect market condition there is easy access to information and the flotation and the transaction costs do not exist. The securities are infinitely divisible and hence no single investor is large enough to influence the share value.
- It is assume that there are no taxes, implying that there are no differential tax rates for the dividend income and the capital gain.
- There is neither a constant dividend policy of firm, which will not change the risk completion nor the rate of return even in cases, where the investments are funded by the retained earnings.
- It was also assumed that the investors are able to forecast the future earnings the dividend and the share value of the firm with certainty. This assumption was however, dropped out of the model.

Modigliani and Miller provided the proof in support of their argument in the following manner.

**Step-1**

In the first step the market price of shares equal to the sum of the present value of dividend paid and the market price at the end of the period.

Symbolically;

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

Where,

$P_0$  = Current market price of the share

$P_1$  = Market price of the share at the end of the period ( $t=1$ )

$D_1$  = Dividend per share to be paid at the end of the period ( $t=1$ )

$K_e$  = cost of equity capital

Step-2

If no new external financing exists market value of a firm can be computed by multiplying both sides by the number of outstanding share as follows

$$np_0 = \frac{n(D_1 + P_1)}{1 + K_e} \dots\dots\dots (ii)$$

Where,

$N$  = number of equity share at zero period

Step-3

If retained earning is not sufficient to finance the investment opportunities. Issuing new share is the other alternative. Assuming that 'm' is the number of newly issued equity share at the price of  $p_1$ , the value of firm at time zero will be:

$$np_0 = \frac{nD_1 + P_1 (n+m) - mp_1}{1 + K_e}$$

Where,

$n$  = no of shares at the begging

$m$  = no of new equity share issued at the end of the period

Step-4

If the firm were to finance all investment proposals, it may finance either by retained earnings or by the issuance of new shares or both. Thus total value of the newly issued stock will be as follows;

$$mp_1 = I - (E - nD_1)$$

Or  $mp_1 = I - E + nD_1 \dots\dots\dots (iv)$



Where,

I = total investment amount required

E = Total amount of earning

$nD_1$  = Total amount of dividend paid

$E - nD_1$  = Amount of retained earning

$mp_1$  = value of newly issued stock

Step-5

Substituting the value of  $mp_1$  from equation (iv) to equation (iii), we get

$$np_0 = \frac{nD_1 + P_1 - 1 + E - nD_1}{1 + Ke}$$
$$np_0 = \frac{P_1(n + m) - 1 + E}{1 + Ke} \dots\dots\dots (v)$$

Conclusion:

Since dividend does not appear directly in expression and E, I,  $P_1(n+m)$  and  $Ke$  are assumed to be independent of dividend. In other words, MM reach into conclusion that dividend does not matter and hence irrelevant. Therefore, dividend policy of firm has no impact on market value of the firm.

MM conclude that the current value of the firm is independent of its current dividend decision. The gainer by stockholders in increased dividend is offset exactly by the decline in the terminal value of their stock. MM shows that the  $NPo$  is unaffected not only by current dividend decision but future dividend decision as well. Thus the stockholders are indifferent between retention and the payment of dividends in all future periods and stockholders wealth is unaffected by current and future dividend decisions.

It does not seem to apply MM approach in Nepalese context because when we apply this approach the assumption supposed by mm are significantly deviated. In Nepal, we are enabling to find the rational investors as well as perfect capital market, which are considered by MM. It does not seem so sound to neglect the flotation cost transaction cost and tax effect on capital gain as neglected by MM. Arbitrage arguments as explained by mm applies only when there are very sensitive investors

and which are lacking in Nepal. A conscious in use for always finds different between dividend and retained earnings. Thus, MM proposition is not relevant in the case of Nepal.

**b) Walter's Model (1966)**

Professor Jams E. Walter conducted a study on dividend and stock prices in 1966. He proposed a model for share valuation. According to him the dividend policy of a firm cannot be looked aside from investment policy. His argument is just opposite of what Modigliani and Miller said. He argued that dividend policy affects the stock prices. In this model he studied the relationship between the internal rate of return (r) and the cost of capital of the firm (k), to give a dividend policy that maximizes the shareholder's wealth. Walter's model is based on the following assumptions:

- Retain earnings constitute the exclusive source of financing. The firm does not resort to debt or equity financing.
- The firm's internal rate of return and its cost of capital are constant.
- All earning of the firms are either distributed as dividend of reinvested internally.
- There is no change in value of earning per share and the dividend per share.
- The firm has perpetual or infinite life.

According to Walter, the market price of the share is taken as the sum of the present value of the future cash dividends and capital gains. His formula is based on the share valuation model and is arrived at in the following manner;

$$P = \text{DPS}/K_e + r/k (\text{EPS}-\text{DPS})/k_e$$

or,

$$P = \text{DPS} + r/k_e (\text{EPS}-\text{DPS})/k_e$$

Where,

p = market price per share

EPS = Earning per Share

DPS = dividend per share

Ke = cost of capital or capitalization rate

r = internal rate of return.

The model studies the relevance of the dividend in three situations.

Firms	Nature	Optimal payout ratio
Growth	$r > k_e$	0%
Normal	$r = k_e$	DPR does not affect
Decline	$r < k_e$	100%

According to Walter's model, the optimum dividend policy depends on the relationship between the firm's internal rate of return ( $r$ ) and its cost of capital ( $k$ ), Walter's view on the optimum dividend payout ratio can be summarized as follows;

#### **Growth Firms ( $r > k$ )**

If the firm's internal rate of return exceeds the cost of capital, the relationship between dividends and stock price is negative i.e. more dividends to lead low stock prices. This kind of firm is referred to as growth firms. Walter argued that zero dividends would maximize the market value of shares for growth firms.

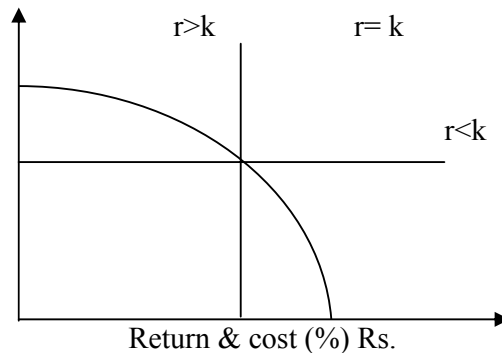
#### **Normal Firms ( $r = k$ )**

Firm having  $r = k$  may be referred as normal firm. There is no unique optimum payout ratio for a normal firm. One dividend policy is as good as the other. The market price per share is not affected by the payout ratio. Where  $r = k$ .

#### **Declining Firms ( $r < k$ )**

If the firm's internal rate of return ( $r$ ) is less than the cost of capital ( $k$ ) the relation between dividends and stock price positive i.e. increase in dividend per share yield increase in stock prices. This kind of firm is referred to as declining firm. He argued, 100% dividend policy would maximize the market price of share for declining firm.

**Figure 2.3**  
**Earning, Investment and New Financing under Walter's Model**



Thus the Walter's model the dividend policy of the firm depends on the available of investment opportunities and the relationship between the firm's internal rate of return ( $r$ ) and its cost of capital ( $k$ ). The firm should use earning to finance investment if  $r > k$ ; should distributed all earning when  $r < k$  and would remain indifferent when  $r = k$ .

**c) Gorden's Model (1962)**

This approach was developed by Myron Gorden in 1962. Gorden uses the dividend capitalization approach to study the effect of the firms' dividend policy on the stock price. The conclusion of his study is that investors value the present dividend more than capital gain. His argument insisted that an increase in dividend payout ratio leads to increase in the stock price for the reason that investors consider the dividend yield ( $D_1/P_0$ ) is less than the expected capital gain.

Hence, investors required rate of return increase as the amount of dividend decrease. This shows that there exists a positive relationship between the amount of dividend and the stock prices.

The following are the assumption based on which Gorden based the dividend policy model for firms;

1. The firm will be an all- equity firm with the new investment proposals being financed solely by the retained earnings.
2. Return o investment ( $r$ ) and the cost of equity capital ( $k_e$ ) remain constant.
3. No external financing is available.
4. Firm has an infinite life.

5. The retains ratio remains constant and hence the growth rate also is constant ( $g = br$ )
6.  $K > br$ , i.e. cost of equity capital is greater than the growth rate.

Based on the above assumption, Gordon provided the following formula, which is a simplified version of the original formula (*Franc, 1972*) to determine the market value of a share,

$$P_0 = \frac{EPS(1 - b)}{K_e - br}$$

Where,

- $P_0$  = market price per share
- EPS = earning per share
- $b$  = retention ratio
- $1-b$  = dividend payout ratio
- $K_e$  = cost of equity capital or cost of capital of the firm
- $Br = g$  = growth rate ( $g$ ) in the rate of return on investment.

Therefore, Gordon correlated that the firm, share value is positive with the payout ratio where  $r > k_e$  and decrease with an increase in the payout ratio when  $r < k_e$ . Thus firms with rate of return greater than the cost of capital should have a higher retention and those firms, which have a rate of return less than the cost of capital, should have a lower retention ratio. “The dividend policy of firms which have a rate of return equal to the cost of capital will however not has any impact on its share price.” (*Gautam and Thapa;2008:356*)

#### d) **Linter’s Model (1956)**

Linter made an important study focusing on the “Behavioral aspect of dividend policy” in the American context. He investigated a partial adjustment model as he tested the dividend patterns of 28 companies. He concluded that a major portion of the dividend of a firm could be expressed in the following way;

$$DIV_t = PEPSt$$

$$DIV_t - DIV_{t-1} = P EPSt - DIV_{t-1}$$

$$DIV_t - DIV_{t-1} = b (P EPSt - DIV_{t-1})$$

$$DIV_t - DIV_{t-1} = a + b(P EPSt - DIV_{t-1}) + e_t$$

$$DIV_t = a + bPEPSt - b DIV_{t-1} + e_t$$

$$DIV_t = a + bPEPSt - bDIV_{t-1} + e_t$$

$$DIV_t = a + b DIV_{t-1} + (1-b) DIV_{t-1} + e_t$$

Where,

EPSt = earning per share

DIVt = dividend in time t

P = target payout ratio

A = constant relation to dividend

(1-b) = safety factors

$e_t$  = error term

B = the adjustment factor relation to the previous period's dividend and new desired level of dividends where  $b < 1$ .

The major finding of this study was as follows;

- Firms generally think in terms of proportion of earnings to be paid out. Investment requirements are not considered for modifying the pattern of dividend per share (or dividend rate)
- Firms generally have target payout ratios in view while determining change in dividend per share (or dividend rate)

**e) Van Horne and Mc Donald's Study (1971)**

Van Horne and Mc Donald conducted a comparative study on dividend policy and new equity financing. The purpose of this study was to investigate the combined effect of dividend policy and new equity financing decision on the market value of the firm's common stocks.

Empirical tests were preferred with a time end cross section for two industries, using a well known valuation model. For their investigation, they employed two samples of firms: viz. the 86 electric utilities in the continental U.S., which were included on the COMUSTAT utility data, tape; and 39 companies in the electronics and electronic component industries as listed on the COMUSTAT industrial data tape in 1968.

The First Model was

$$Po/Eo = a_0 + a_1 (g) + a_2 (Do/Eo) + a_3 (Lev) + U$$

Where,

Po/Eo = Closing market price in 1968 dividend by the compound annual rate of growth in assets per share for 1960 through 1968.

Do/Eo = Dividend payout, measured by the cash dividend in 1968 dividend by earning in 1968.

Lev = Financial risk, measured by interest charge dividend by the different of operating revenues and operating expenses.

U = error term

The Second Model was

$$Po/Eo = a_0 + a_1 (g) + a_2 (Do/Eo) + a_3 (Lev) + a_4 (fa) + a_5 (fb) + a_6 (fc) + a_7 (fd) + U$$

Where,

Fa, fb, fc and fd are dummy variables corresponding to new issue ratio (NIR) group A through D.

It is noted that had grouped the firms in five categories; A, B, C, D and E by NIR. For each firm the value of dummy variables representation its NIR group is one and the values of remaining dummy variables are zero.

Again they tested the following regression equation for electronics- electronic components industry.

$$Po/Eo = a_0 + a_1 (g) + a_2 (Do/Eo) + a_3 (lev) + a_4 (OR) + U$$

Where,

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

By using these models they compared the result obtained for the firms which both pay dividend and engage in new equity financing with other firms in an industries sample. they concluded that for electric utility firms in 1968, share value was not adversely affected by new equity financing in the presence of cash dividends, except for those firms in the highest new issue group and it made new equity amore costly form of financing than remain of earnings. They also indicated that the payment of dividend through excessive equity financing reduces share prices. For forms in the electronics electronic component industry, a significant relationship between new equity financing and value was not demonstrated (*Adhikari; 2008:46*).

#### **2.4 Review of Thesis**

Bhattraï (2002), conducted his masters research on “*Dividend Policy and Its Impact on Market Price of Stock*” with data taken from two commercial banks and two insurance companies in 2002. He analyzed the data multiple regression equations. The main objective of the study is as follows;

- a. To study the prevailing practices and efforts made in the dividend policy in the Nepalese firms with the help of sample firms.
- b. To find out the impact of dividend policy on market price of stock.
- c. To analyze if there is any uniformity among DPS, MPS and DPR in the sample firms.

Major finding of his study are as follows;

- a. There is not any consistency in dividend policy in the sample firms. It has indicated the need of dividend strategy as well as the need of proper analysis of the respective sector of the firms.
- b. The MPS is affected by the financial position and the dividend paid by the firms in this regard, the MPS of the sample firms is seemed to be fluctuated. It denotes that Nepalese investors are not treated fairly.
- c. Most of the Nepalese firms from the very past did not have profit planning and investment strategy, which has imbalanced the whole position of the firms, if means there is no consistency even in the earnings.
- d. The lack of financial knowledge and the market inefficiency has affected the market price of the share in all the firms.



Regmi (2006), conducted a study on “*Impact of Dividend on Market Price of Share With Reference to Five Commercial Banks Listed in NEPSE*” the specific objectives were as follows;

- a. To examine the relationship between dividends and stock prices.
- b. To determine the impact of dividend policy on stock prices.
- c. To analyze the financial variable affecting the stock value and impact the dividend paying implication under dividend valuation model.

The main findings of his study are as follows:

- a. The MPS is affected by the financial position and the dividend paid by the firms, in this regard the MPS of the sample firms are seen to be fluctuated. It denotes Nepalese investors are not treated fairly.
- b. There was correlation between EPS and DPS.
- c. In aggregate, dividend paid by the company is not stable.

Bhurtel (2006), conducted a study on “*Dividend Policy and Its Impact on Stock Price*”. The basic objective of the study was to identify the relationship between dividend and market price per share the major objective other this study can be stated as follows;

- a. To analyze the properties of portfolio on dividend
- b. To examine the relationship between dividend and stock price
- c. To survey the opinion of financial executive’s on corporate dividend practices

These are the major finding of his study:-

- a. From the descriptive analysis the researcher found there is not any consistency in dividend policy in the sample banks, which has maintained stable dividend per share policy. It has indicated the need of dividend policy as well as the need of proper analysis of the banks.
- b. The MPS is affected by the financial position and the dividend paid by the firms, in this regards the MPS of the sample firms are seen to be fluctuated. It denotes Nepalese investors are not treated fairly.

- c. Most of the Nepalese firm from the very past have not profit planning and investing strategy, which have imbalanced the whole position of the firms. It means there is not consistency even in the earning.

Adhikari (2008), has conducted a study on “*Impact of Dividend on Market Price of Share.*” The specific objectives of his study are as follows;

- a. To examine the practices and effort made in dividend policy in the Nepalese firms with the help of sample firms.
- b. To analyzed if there is any uniformity among DPS, EPS, MPS, net worth and DPS in the sample firms.
- c. To examine the impact of dividend on market price of stock.

The findings drawn by the study are as follows;

- a. Dividend per share affected the share price validity in different sectors.
- b. The relationship between dividend per share and stock price was positive in the sample companies.
- c. Changing the dividend policy of dividend per share right help to increase the market price of shares.

Bhattra (2009), conducted a study on “*Dividend Practices of Commercial Banks and Its Impact on Stock Prices.*” The specific objectives of the study are as follows;

- a. To analyze the impact of dividend on stock price.
- b. To identify the determination of the dividend per share (DPS) and market price of stock (MPS).
- c. To analyze the relationship of DPS with EPS and MPS.
- d. To compare dividend practices of selected commercial banks.

The summary of the major finding of the study was as follows;

- a. There is high degree positive relationship between DPS and EPS in most of the banks as they are statically significant.
- b. Relationship between DPS and MPS is found to be high degree positive in most of banks as they are statically significant also.
- c. All the selected banks paid dividend in each year which shows that dividend paying practice is established in Nepalese commercial banks.

- d. The dividend per share of Nepalese commercial bank is depending on current earnings. The banking is following earning based dividend policy.

Bista (2010), conducted a study on “*Impact of Dividend on Market Price of Share of Selected Commercial Banks.*” The specific objectives of the study are as following;

- a. Highest the aspect of dividend policy of selected commercial banks.
- b. To examine at the relationship of dividend with various factors like, DPS, MPS, Net worth, Net earning.
- c. To identify the uniformity among DPS, EPS and DPR of the selected commercial banks.

The summary of the major finding of the study are as follows;

- a. The market price per share is affected by the dividend related financial variable i.e. DPS and DPR either positively or negatively changes are DPS affected the market price per share differently in different bank.
- b. Beside dividend, others factors also affected the market price per share i.e. earning per share price earning ratio, net worth per share etc. Their effect is also different banks.
- c. In case of same banks, there exists negative relationship besides the MPS. Largely depends upon the dividend which been shown by the coefficient of multiple determination.

Gautam (2011), conducted his master’s research on “*A Comparative Study of Dividend Policy of Commercial Banks*” by using the secondary data of three banks is 1996 has following objectives;

- a. To identity what type of dividend policy is being followed and find out whether the policy followed is appropriate or not.
- b. To examine the impact of dividend on shares prices.
- c. To identify sample commercial banks.

Major finding of the study are as follows;

- a. Analysis indicates the largest fluctuations in earnings per share and dividend per share. No banks exhibit dividend payout ratio.

- b. Share of the financial institution are actively traded and market prices are increasing.
- c. Average EPS and DPS of all concerned banks are satisfactory.
- d. No Commercial banks seen to be guided by cleanly deigned dividend strategy in spite of the good earnings and potentials.
- e. Correlation between DPS and EPS of all sample banks is fairly positive but it is fairly safe to say that the relationship is not significant.
- f. Theoretically, issue of bonus share has equal impact on EPS impact on EPS, MPS and DPS, but in case of sample banks a significant variation in the degree of impact is observed.
- g. Positive relationship of dividend payout with liquidity, profitability, assets turnover and interest coverage ratios.

### **Research Gap**

There have been many national and international studies in the field of dividend policy to date. Those studies have tried to find out the relationship between dividend policy and market price of the stock. Nepalese capital market is in the early stage of development so the conclusion made by the international studies concerned like Pradhan's and Manadhar's which can be considered to be landmark in the field of dividend policy.

In this study, it tries to take new thesis, journals and articles from different researchers which are related to dividend policy that helps to know about dividend practice and its effect on financial indicators, relationship among them and shows actual dividend behavior in Nepal. This study has covered six leading commercial bank that listed in NEPSE. Five years data have been analyzed with due consideration of EPS, DPS, DPR and MPS. It also tries to evaluate how the market price behaves with various independent factors EPS and DPS. Analyses of financial indicators, standard deviation, regression analysis etc. are used as the main models in the study with a view to obtain the relevant and accurate results. It shows the practice of dividend policy adopted by major commercial bank of Nepal. So, it has been believed that this study will be different and comprehensive as compared to previous research and study.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research Methodology indicates the methods and processes employed in the entire aspect of the study. In other words, research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives. Research methodology is a way for systematically solving the research problem. So, it is the methods, steps, and guidelines which are to be followed in analysis and it is a way of presenting the collected data with meaningful analysis. In other words, it is a systematic way to find research problems.

This chapter has been divided into four sections. Section one represent the research design, while section two describes the nature and source of data, section three represent the population and sample and section four explains the method of analysis.

#### **3.2 Research Design**

The research design of this study basically follows the impact of dividend on stock price. In other words, this research is designed so as to find out the impact on the market price of common stock of a company when dividend is paid to the shareholders and also how the market price of stock responds when dividend is not paid to the shareholders. In other words, the study is closely related to the impact of dividend on market price of common stock and wealth position of shareholders. Therefore, the descriptive as well as the analytical approach design are adopted here to make the analysis more effective, financial tools, statistical tools and testing models are also used.

#### **3.3 Nature and Source of Data**

This study is based on the secondary data. The data relating to the dividend decision, which are directly obtained from commercial bank. Annual reports, balance sheet, profit and loss account of commercial banks are main source of data. Main sources of secondary data are:

- Annual report published by commercial bank
- Data are collected for the year 2007/2008 to 2011/2012 in case of NABIL, SCBL, SBL, EBI, BOK, and LAXMI as five years data are analyzed.
- Nepal Stock Exchange, website (www.nepalstock.com) and perspective firm's central office and security exchange board are used as cross reference.

### **3.4 Methods of Analysis**

Various Financial and Statistical tools have been used to analyze the data of this study.

#### **3.4.1 Financial Tools**

Financial tools are those which help to study the financial position of the firms. The financial tools used in this study are as follows.

##### **a) Earning Per Share(EPS)**

The profitability of common stockholder's investment can be measured in many other ways. The income of per share is calculated by dividing the earning available to common shareholders by the total number of common stock outstanding, thus,

$$\text{EPS} = \frac{\text{Earning Available to Common Shareholders}}{\text{Number of Common Stock Outstanding}}$$

The higher earning indicates the better achievements in terms of profitability of the bank by mobilizing their funds and vice versa. In other words, the Earning per share indicates the strength and weakness of the bank.

##### **b) Dividend Per Share (DPS)**

The whole amount of earning may or may not be distributed to shareholders by a company. How much per share the dividend is distributed to common shareholder's can be known from this ratio. The dividend distributed among the common shareholders on a per share basis can be determined by this ratio

Formula for calculating this ratio is as under

$$\text{DPS} = \frac{\text{Total Dividend Amount}}{\text{No of Outstanding Shares}}$$

Generally, the higher DPS creates positive attitude of the shareholders toward the bank is common stock, which consequently helps to increase the market value of the shares and it also works as the indicator of better performance of the bank management.

**c) Dividend Pay Out Ratio (DPR)**

The purpose of calculating this ratio is to know the portion of dividend distributed out of total earning. This ratio shows the relation between the returns belonging to equity shareholders and the dividend paid to them.

It can be calculated as under:

$$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Dividend per share}}{\text{Earning per share}}$$

The higher the dividend payout ratio, the lower will be the proportion of retained earning and vice versa.

**d) Market Price per Share (MPS)**

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

**e) Dividend Yield (DY) Ratio**

It defined the relationship between dividend per share and market value per share. It is very useful for the investors. So, dividend yield is the dividend received by the investors as a percentage of market prices per share in stock market. Thus,

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

**f) Price Earning Ratio( P/E)**

This ratio is closely related to the earning yield. The reciprocal of the earning yield is called the price earning ratio. It is very useful to prospective investors. The higher P/E ratio implies the high market price of a stock given the earning per share and greater confidence of investor in the firms future. Thus,

$$\text{P/E Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

**3.4.2 Statistical Tools**

Besides the financial tools, various statistical tools have been used to conduct this study. The result of analysis has been properly tabulated, compared, analyzed and interpreted. In this study, the following statistical tools are used to analyze the relationship between dividend and other variables.

**a) Arithmetic Mean or Average**

Arithmetic Mean is the average return over periods. Arithmetic mean of a given set of observation is their sum divided by the numbers of observations. In general,  $X_1, X_2, \dots, X_n$  are given 'n' observation and observation. It is calculated by

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

**b) Standard Deviation**

Standard deviation is quantitative measure of total risk. It provides more information about the risk of the assets. The standard deviation of a distribution is the square root of the variance of returns around the mean. It measures the absolute dispersion; the following formula is applied to calculate the standard deviation, using historical returns.

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



**c) Coefficient of Variation**

The coefficient of variation is the relative measure of dispersion, comparable across distribution which is defined as the ratio of standard deviation to the mean expressed in percent. The risk per unit of expected return can be measured by coefficient of variation. It should be used to compare investments when both the standard deviation and the expected values differ. C.V. is computed as follows

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

The higher C.V. denotes the higher variability of variable and vice versa.

**d) Correlation Coefficient (r)**

Correlation Coefficient measures the relationship between two variables. It is the statistical tool, which can be used to describe the degree to which one variable is linearly related to another and measures the directions of relationship between two set and figures. Correlation coefficient can be either positive or negative which range from +1 to -1 more precisely, if both variables are changing in the same direction, the correlation is said to be positive, on other hand, if both variables are changing oppositely to each other, then correlation is known as negative. Correlation can be seen between or among several variables. The correlation coefficient can be calculated as:

$$\text{Correlation Coefficient (r)} = \frac{\text{Covariance (X, Y)}}{S.D._x \times S.D._y}$$

Where

$$\text{Covariance (x, y)} = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{n}$$

r = Karl Pearson's Correlation coefficient

Under this study, correlation between the following variables is analyzed:

- a) Market price per share and earning per share
- b) Market price per share and dividend per share

- c) Market price per share and dividend payout ratio
- d) Market price per share and dividend yield
- e) Market price per share and price earning ratio

**e) Coefficient of Determination ( $r^2$ )**

The coefficient of determination is the primary way to measure the extent or strength of the association that exists between two variables, x and y. It refers to a measure of the total variance in a dependent variable that is explained by its linear relationship to an independent variable. The coefficient of determination is denoted by  $r^2$  and the values lies between zero and unity or the  $r^2$  is always a positive number. The  $r^2$  is defined as the ratio of explained variance to the total variance. Thus,

$$\text{Coefficient of Determination} = \frac{\text{Explained Variance}}{\text{Total Variance}}$$

**f) Regression Analysis**

Regression analysis studies the statistical relationship between the variables. The main objective of regression analysis is to predict or estimate the value of dependent variable corresponding to a given value of independent variables. There are two types of regression analysis.

**I) Simple Regression Analysis**

Simple regression analysis, concerned with the study of the relationship between one variable called dependent variable and another variable called independent variable. Regression analysis has been developed to study and measure the statistical relationship between two variables only, and then the process is known as simple regression analysis. In simple linear regression, a mathematical regression equation is developed to describe the functional relationship that exists between the two variables. In this study the following simple regression have been analyzed;

- a) Market Price Per Share on Dividend per Share

$$y = a + bx$$

Where,

$$y = \text{Market price per share (MPS)}$$

- a = Regression constant
- b = Regression coefficient
- x = Dividend per share (DPS)

This model has been constructed to examine the relationship between market price per share (dependent variable) and Dividend per share (independent variable)

b) Market Price Per Share on Earning Per Share

$$y = a + bx$$

Where,

- y = Market price per share (MPS)
- a = Regression constant
- b = Regression coefficient
- x = Earning per share (EPS)

This model has been constructed to examine the relationship between MPS (dependent variable) and EPS (independent variable).

c) Market Price Per Share (MPS) on Dividend Payout Ratio (DPR)

$$y = a + bx$$

Where,

- y = Market price per share (MPS)
- a = Regression constant
- b = Regression coefficient
- x = Dividend payout ratio (DPR)

d) Market Price Per Share (MPS) on Dividend Yield

$$y = a + bx$$

Where,

- y = Market price per share (MPS)
- a = Regression constant
- b = Regression coefficient
- x = Dividend yield

The relationship between MPS (dependent variable) and Dividend yield ( independent variable) can be explained through this model

e) Dividend Per Share on Earning Per Share

$$y = a + bx$$

Where,

y = Dividend price per share (DPS)

a = Régression constant

b = Régression coefficient

x = Earning per share

The relationship between DPS (dependent variable) and EPS (independent variable) can be explained through this model.

In order to obtain the value of 'a' and 'b", we have the following two normal equations;

$$\sum Y = na + bx$$

$$\sum XY = a\sum x^2$$

Where,

'a' and 'b' are unknown

n = number of observation in the sample.

## II) Multiple Regression Analysis

In multiple regression analysis, two or more independent variables are used to estimate the values of dependent variable. It is extension of simple regression technique, thus multiple regression analysis consists of the measurement of the relationship between the dependent variable and two or more independent variables.

The main objectives of multiple regression analysis are;

1. To derive an equation which provide estimates or the dependent variable from values of the two or more independent variables.
2. To obtain a measure of the proportion of variance in the dependent variable which is explained by the independent variable

3. To obtain a measure of error involved in using the regression equation as a basis for estimation using this regression equation as a basis for estimation of the dependent variable.

In this study, the following multiple regression analysis have been analyzed.

- a) Market price per share on Earning price per share and Dividend per share

$$y = a + b_1x_1 + b_2x_2$$

Where,

y = Market price per share

a = Regression constant

$b_1$  &  $b_2$  = Regression coefficient of 1<sup>st</sup> and 2<sup>nd</sup> variable

$X_1$  &  $X_2$  = EPS and DPS respectively

This model helps to predict the MPS on EPS and DPS

- b) Market Price Per Share on Earning Per Share and Dividend Payout Ratio

$$y = a + b_1x_1 + b_2x_2$$

Where,

y = Market price per share

a = Regression constant

$b_1$  &  $b_2$  = Regression coefficient of 1<sup>st</sup> and 2<sup>nd</sup> variable

$x_1$  &  $x_2$  = EPS and DPR respectively

It helps to predict the MPS on EPS and DPR

### **Regression Constant**

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

### **Regression Coefficient**

The regression coefficient of each independent variable indicates the marginal relationship between that variable and value of dependent variable, holding constant

the effect of all other independent variable in the regression model. In other words, the coefficient describes how changes in independent variables affect the values of dependent variable's estimate.

### **Standard Error of Estimate (SEE)**

With the help of regression equation perfect prediction is practically impossible, standard error of estimate is a measure of reliability of the estimating equation indicating the variability of the observed points around the regression line, that is the extent to which observed values differ from their predicted values on the regression line. The smaller the value of SEE, the closer will be the dots to the regression line and the better the estimates based on the equation for this line. If SEE is zero, then there is on variation about the line and the correlation will be perfect. Thus, with the help of SEE, it is possible for us to ascertain how well the representative the regression line is as a description of the average relationship between two series.

### **Hypothesis Test**

Hypothesis means the presumption or quantitative statement of the population parameter which may be true or false. In order to make proper decision about the quantitative statement of the population, hypothesis is an assumption about unknown result while testing of hypothesis, an assumption is made about the population parameter to test whether the assumption is right or not, a sample is selected from the population, sample statistic is obtained, observe the difference between the sample mean and the population hypothesized value and test whether the test is significant or insignificant.

### **F- Test**

T test generally known as variance ratio test and is mostly used in context of analysis of variance. F- Statistics is used to test the significance of mean value of EPS, DPS, MPS, DY, DPR and P/E ratio. F test is considered to be more appropriate, for test of hypothesis of quality among several sample meant test initially used to verify the hypothesis of equality between two variance. In fact F test is a test of significance concerning two sample variance. The fundamental assumptions of F- test are;

1. The population is normal
2. The observation is independent and sample are drawn randomly

3. There is no measurement error

The objective of F- test is to test hypothesis where the two samples are from same normal population with same variance.

### 3.5 Regression Analysis Development

#### a. Simple Regression Analysis

Three simple regression analyses would be done which are as follows:

i)  $Y = a + bx$

Or,  $MPS = a + b(DPS)$

Where,

MPS = market price per share

DPS = Dividend per share

a & b is regression coefficient.

ii)  $Y = a + bx$

Or  $MPS = a + b(EPSt)$

Where,

EPSt = earning per share

iii)  $Y = a + bx$

or,  $DPS = a + b(EPSt)$

#### b. Multiple Regression Analysis

Two multiple regression analysis would be done which are as follows;

i)  $Y = a + b_1 x_1 + b_2 x_2$

$MPSt = a + b_1(DPSt) + b_2(EPSt)$

Where,

MPSt = Market price per share for t year

DPSt = Dividend per share for t year

EPSt = Earning per share for t year

a, b1, & b2 are regression coefficient.

ii)  $Y = a + b_1 x_1 + b_2 x_2$

Or,  $DPS_t = a + b_1 (EPS_t) + b_2 (DPS_{t-1})$

Where,

$DPS_t$  = Dividend per share for t year

$EPS_t$  = Earning per share for t year

$DPS_{t-1}$  = Dividend per share for t-1 year

a,  $b_1$ , &  $b_2$  are regression coefficient.

### **3.6 Hypothesis Development**

#### **First set of Hypothesis**

Null Hypothesis ( $H_{01}$ ): There is no significance difference among mean value of DPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{11}$ ): There is significance difference between among mean value of DPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

#### **Second set of Hypothesis**

Null Hypothesis ( $H_{02}$ ): There is no significance difference among mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{12}$ ): There is significance difference between among mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

#### **Third set of Hypothesis**

Null Hypothesis ( $H_{03}$ ): There is no significance difference among mean value of MPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{13}$ ): There is significance difference between among mean value of MPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.



**Fourth set of Hypothesis**

Null Hypothesis ( $H_{04}$ ): There is no significance difference among mean value of DPR of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{14}$ ): There is significance different among mean value of DPR of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Fifth set of Hypothesis**

Null Hypothesis ( $H_{05}$ ): There is no significance difference among mean value of Dividend yields of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{15}$ ): There is significance difference among mean value of Dividend yield of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Six set of Hypothesis**

Null Hypothesis ( $H_{06}$ ): There is no significance difference among mean value of P/E ratio of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{16}$ ): There is no significance difference among mean value of P/E ratio of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

## **CHAPTER - IV**

### **PRESENTATION AND ANALYSIS OF DATA**

In this chapter, to achieve the objective, which is set in introduction chapter, the relevant data and information on dividend policy and its impact on market price of stock of commercial banks are presented. Presentation and analysis of data is the study. Using the various financial variable and statistical tools discussed in “Research Methodology”. This Chapter has divided into four sections.

#### **4.1 Presentation of Financial Variables**

Before observing the impact of different financial indicators and variables on dividend as well as value of firm, we need to present and analyze them systematically. For this purpose DPS, EPS, DPR, MPS, DY, P/E ratio have been selected as an effecting variables. However these variables show the dividend status of the banks as well as their strength. Consequently, helps to identify the banks' position regarding dividend payout. These variables have been presented by the help of table, figure and analyzed by using statistical tools as specified in chapter three.

##### **4.1.1 Analysis of EPS of the Sample Banks**

The profitability of common stockholder’s investment can be measured in many other ways. The income of per share is calculated by dividing the earning available to common shareholders by the total number of common stock outstanding, thus,

$$\text{EPS} = \frac{\text{Earning Availbleto Common Shareholders}}{\text{Number of Common Stock Outstanding}}$$

The higher earning indicates the better achievements in turns of profitability of the bank by mobilizing their funds and vice versa. In other words, the Earning per share indicates the strength and weakness of the bank.

The Earning per share of the sample banks under study are tabulated as follows:

**Table 4.1**  
**EPS of Sample Banks**

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LAXMI	Average
2007/08	115.86	131.92	17.29	59.94	91.82	16.45	72.21
2008/09	113.44	109.99	22.89	54.68	99.99	20.70	70.28
2009/10	83.81	77.65	21.99	43.08	100.16	24.12	58.47
2010/11	70.67	69.51	19.82	44.51	83.18	23.25	51.82
2011/12	83.57	72.60	20.41	37.88	88.55	21.55	54.09
Total	467.35	461.67	102.40	240.09	463.70	106.07	
Mean	93.47	92.33	20.48	48.02	92.74	21.21	
S.D.	17.95	24.51	1.93	8.07	6.59	2.67	
C.V. (%)	19.21	26.55	9.44	16.82	7.11	12.59	

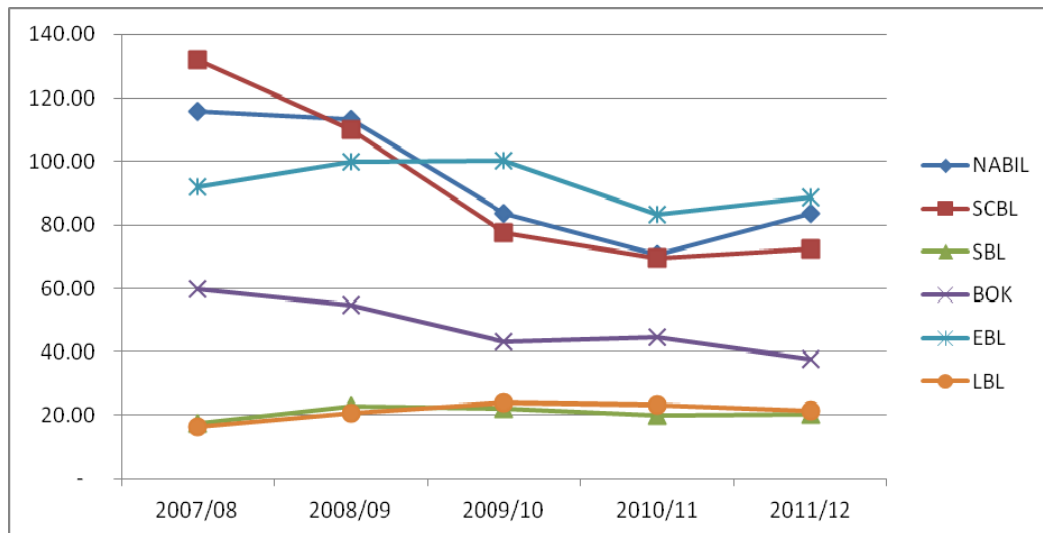
*Source: Appendix I and II*

Table 4.1 shows the EPS of the selected banks from the year 2007/08 to 2011/12. In the table mean, standard deviation and coefficient of variation respective have been presented. The EPS of NABIL range between Rs. 70.67 to Rs.115.86 during the period of study. During this period, the average EPS is Rs.93.47, the S.D. of the EPS is 17.95 and the C.V. of sample bank is 19.21%. SCBL within the period of study has an average EPS of Rs.92.33 ranging between Rs. 69.51 to Rs. 131.92. The S.D. is 24.51 and the fluctuation of 26.55% in shown by the C.V. of the bank. During the period of study SBL has an average EPS of Rs.20.48 with the S.D. 1.93. The EPS range between Rs.17.29 to Rs. 22.89. The C.V. shows there is period of study which is 9.44%. The average EPS of BOK, during the period of study is Rs.48.02. It stayed with in the range of Rs37.88 to Rs.54.68. The S.D. of EPS is Rs. 8.07 where as C.V. is 16.82%. EBL has the EPS range between Rs.83.18 to Rs.100.16. The average EPS is Rs.92.74. The S.D. of EPS is Rs.6.59 where as C.V. of EPS is 7.11% during the period of study, LAXMI has an average EPS is Rs.21.21 and S.D. of EPS is Rs.2.67. The EPS range between Rs.16.45 to Rs.24.12. The C.V. shows period of study is 12.59.

Study result:

It can be seen that the average EPS of NABIL is the highest i.e. Rs. 93.47 and average EPS of SBL is the lowest i.e. Rs. 20.48 under the period of study. The C.V. of SCBL is higher among the sample bank i.e. 26.55 % and EBL has lowest i.e. 7.11 % among the sample banks. It indicates that EBL has the most consistent EPS among all sample banks during the period of study. The C.V. of SCBL is higher among the sample bank and EBL has lowest among the sample banks. It indicates that EBL has the most consistent EPS among all sample banks during the period of study.

**Figure 4.1**  
**EPS of Sample Banks**



#### 4.1.2 Analysis of DPS of Sample Banks

The whole amount of earning may or may not be distributed to shareholders by a company. How much per share the dividend is distributed to common shareholder's can be known from this ratio. The dividend distributed among the common shareholders on a per share basis can be determined by this ratio

Formula for calculating this ratio is as under

$$DPS = \frac{\text{Total Dividend Amount}}{\text{No of Outstanding Shares}}$$

Generally, the higher DPS creates positive attitude of the shareholders toward the bank is common stock, which consequently helps to increase the market value of the shares and it also works as the indicator of better performance of the bank management.

The dividends per share of the banks under the study are tabulated as follows

**Table 4.2**  
**DPS of Sample Banks**

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LAXMI	Average
2007/08	60.00	80.00	0.79	2.11	20.00	1.05	27.33
2008/09	35.00	50.00	0.79	7.37	30.00	0.26	20.57
2009/10	30.00	55.00	10.03	15.00	30.00	13.00	25.51
2010/11	30.00	50.00	12.79	16.75	10.00	10.79	21.72
2011/12	40.00	45.00	8.42	21.32	1.58	10.00	21.05
Total	195.00	280.00	32.82	62.55	91.58	35.10	
Mean	39.00	56.00	6.56	12.51	18.32	7.02	
S.D.	11.14	12.41	4.92	6.88	11.18	5.30	
C.V. (%)	28.55	22.16	74.91	54.96	61.05	75.43	

*Source: Appendix I and II*

Table 4.2 shows the DPS of the selected banks from the year 2007/08 to 2011/12. In the table mean, standard deviation and coefficient of variation respectively have been presented.

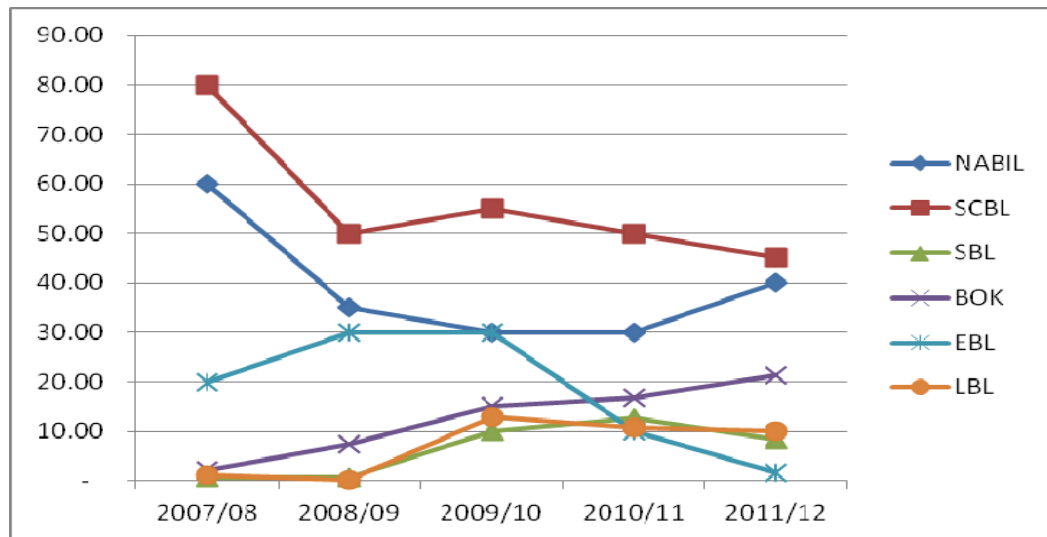
While observing the mean DPS, SCBL in first position with Rs. 56. Similarly NABIL, EBL, BOK, LAXMI and SBL are in 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> position of mean DPS with Rs.39, Rs.18.32, Rs.12.51, Rs.7.02, Rs. 6.56 respectively. This result indicates that SCBL is better than that of other banks with respect to dividend per share. Using the C.V. criterion, we can say that consistency in DPS for SCBL is highest than other banks. C.V. of SCBL is lowest than other banks i.e., 22.16. It indicates the bank is following stable dividend policy in comparison to other banks policy. In another words, as it is less volatile than others are, there is more stability in dividend payment in SCBL. Whereas the DPS of NABIL, SBL, BOK, EBL, and LAXMI is high

fluctuation. Similarly C.V. for NABIL, SBL, BOK, EBL and LAXMI are 28.55%, 74.91%, 54.96%, 61.05% and 75.43% respectively.

Study result:

It can be notified that the average DPS of SCBL is highest i.e. Rs. 56 than other sample banks and the lowest C.V. is 22.16 % i.e. of SCBL and highest C.V. is 75.43% i.e. of SBL which indicates that there is high consistency and stability on dividend payment in SCBL and no consistency in case of SBL.

**Figure 4.2**  
**DPS of the Sample Banks**



#### 4.1.3 Analysis of Dividend Payout Ratio (DPR) of Sample Banks

The purpose of calculating this ratio is to know the portion of dividend distributed out of total earning. This ratio shows the relation between the returns belonging to equity shareholders and the dividend paid to them.

It can be calculated as under:

$$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Dividend per share}}{\text{Earning per share}}$$

The higher the dividend payout ratio, the lower will be the proportion of retained earning and vice versa.

The DPR of the sample banks under the study are tabulated as follows.

**Table 4.3**  
**DPR of Sample Banks**

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LAXMI	Average
2007/08	51.79	60.64	4.57	3.52	21.78	6.38	24.78
2008/09	30.85	45.46	3.45	13.48	30.00	1.26	20.75
2009/10	35.80	70.83	45.61	34.82	29.95	53.90	45.15
2010/11	42.45	71.93	64.53	37.63	12.02	46.41	45.83
2011/12	47.86	61.98	41.25	56.28	1.78	46.40	42.60
Total	208.75	310.85	159.42	145.73	95.54	154.35	
Mean	41.75	62.17	31.88	29.15	19.11	30.87	
S.D.	7.65	9.51	24.07	18.67	10.90	22.31	
C.V. (%)	18.33	15.29	75.49	64.05	57.03	72.28	

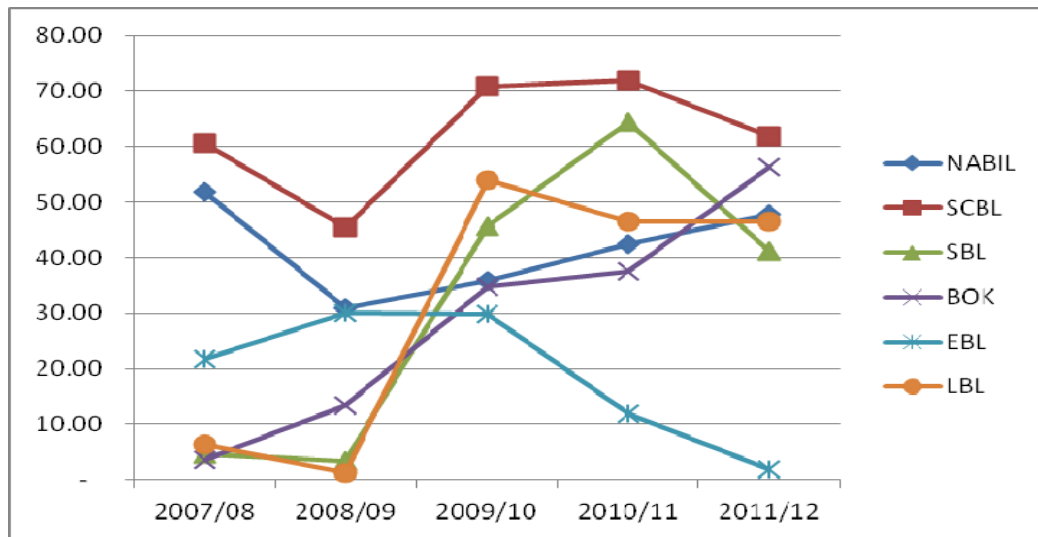
*Source: Appendix I and II*

An average DPR of NABIL is 41.75%. It shows that NABIL generally pay 41.75% of its total earning as dividend to its shareholders. The S.D. of DPR is 7.65. The C.V. is 18.33% which indicates that there is only about 18.33% fluctuation in the DPR of the bank over the study period. SCBL has an average DPR is 62.17% it means SCBL is generally paying 62.17% of its earning as dividend to its shareholders. The S.D. of DPR is 9.51% and the C.V. is 15.29%. An average DPR of SBL indicates that SBL generally payout 31.88% of its total earning as dividend to its shareholders. The S.D. of DPR is 24.07% and C.V. is 75.49%. The C.V. indicates that the DPR of SBL highly inconsistency during the period of study. BOK has an average DPR is 29.15%. It means that BOK generally paying 29.15% of its earning as dividend to its shareholders. The S.D. of DPR is 16.67% and C.V. is 64.05% which is indicates that there is 64.05% fluctuation in the DPR during the period of study. EBL has an average DPR is 19.11% during the study period, bank generally payout 19.11% of its total earning as dividend. The S.D. is 10.90% and the C.V 57.03% fluctuation during the period of study. LAXMI has an average DPR is 30.87%. The S.D. of DPR is 22.31% and C.V is 72.28% which is indicates that there is 72.28% fluctuation in the DPR of LAXMI inconsistency during the period of study.

Study result:

It can be seen that an average DPR of SCBL is higher i.e. 62.17 among the all bank and its C.V. i.e 15.29 % has also lowest among all banks under study. It shows SCBL follows constant dividend payout ratio compare to other sample banks during the period of study. Regarding the C.V. criterion SBL is highly inconsistent in dividend payment.

**Figure 4.3**  
**DPR of Sample Banks**



#### 4.1.4 Analysis of MPS of Sample Banks

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

The MPS of the sample banks under the study are tabulated as follows:



**Table 4.4**  
**MPS of Sample Banks**

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LAXMI	Average
2007/08	5,275	6,830	1,090	2,350	3,132	1,113	3,298.33
2008/09	4,899	6,010	1,000	1,825	2,455	1,062	2,875.17
2009/10	2,384	3,279	444	840	1,630	570	1,524.50
2010/11	1,252	1,800	270	570	1,094	340	887.67
2011/12	1,355	1,799	345	628	1,033	340	916.67
Total	15,165	19,718	2,804	6,213	9,344	3,425	
Mean	3,033.00	3,943.60	560.80	1,242.60	1,868.80	685.00	
S.D.	1,727.27	2,108.90	344.65	715.23	811.81	339.58	
C.V. (%)	56.95	53.48	61.46	57.56	43.44	49.57	

*Source: Appendix I and II*

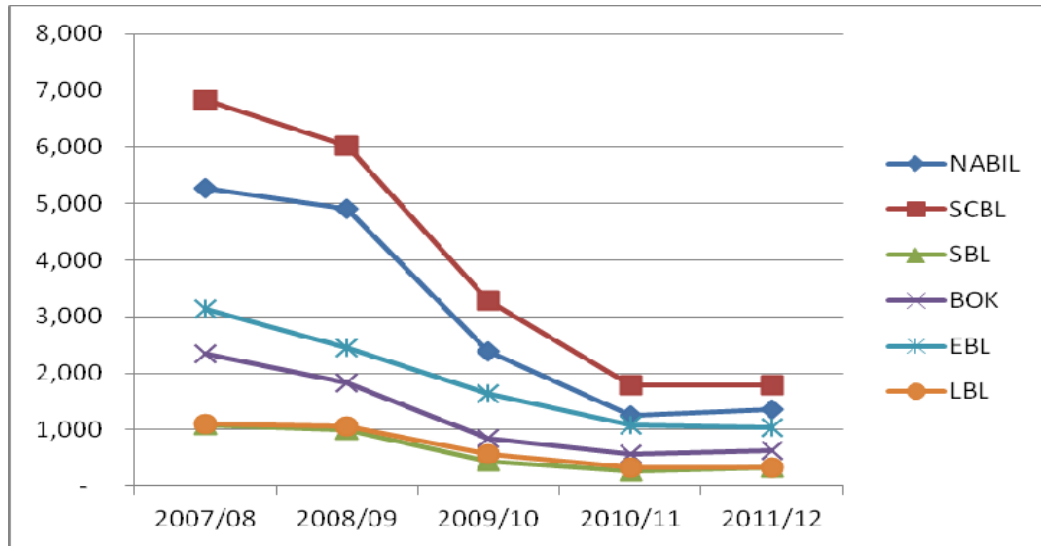
Table 4.4 shows the MPS of selected banks during the study period. Like previous table, MPS of the selected banks has been presented in the top part and mean, standard deviation and coefficient of variation (C.V.) of MPS have been demonstrated in the bottom part.

As per the table, highest mean MPS is Rs.3943.60 of SCBL and the lowest one is Rs.560.80 of SBL. Mean MPS of NABIL, BOK, EBL and LAXMI are Rs.3033, Rs.1242.60, Rs.1868.80 and Rs.685 respectively. By this result we can say that SCBL is best than others i.e. Rs.3943.60. Here the analysis of MPS trend shows that capital increasing rate of all banks is not similar to each other. When we take the CV criterion, consistency in MPS is highest in EBL over the study period that is why is has lowest C.V. (i.e., 43.44%). Similarly C.V. for NABIL, SCBL, SBL, BOK, LAXMI are 56.95%, 53.48%, 61.46%, 57.56%, and 49.57% respectively.

Study result:

The average MPS of SCBL is Rs. 3943.60 which is the highest among all the other sample banks, it means the SCBL is able to retain the faith of general public and investor regarding the investment and return during the period of study. There is consistency on the MPS of EBL as it has lowest C.V. i.e. 43.44 % among all other banks.

**Figure 4.4**  
**MPS for the Sample Banks**



#### 4.1.5 Analysis of Dividend yield (DY) of the Sample Banks

It defined the relationship between dividend per share and market value per share. It is very useful for the investors. So, dividend yield is the dividend received by the investors as a percentage of market prices per share in stock market. Thus,

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

The Dividend Yield (DY) of the Sample banks under study are tabulated as follows:

**Table 4.5**  
**DY of Sample Banks**

Banks Year	NABIL	SCBL	SBL	EBL	BOK	LAXMI
2007/08	1.14	1.17	0.07	0.09	0.64	0.09
2008/09	0.71	0.83	0.08	0.40	1.22	0.02
2009/10	1.26	1.68	2.26	1.79	1.84	2.28
2010/11	2.40	2.78	4.74	2.94	0.91	3.17
2011/12	2.95	2.50	2.44	3.39	0.15	2.94
Total	8.46	8.96	9.59	8.61	4.77	8.51
Mean	1.69	1.79	1.92	1.72	0.95	1.70
S.D.	0.84	0.75	1.74	1.32	0.57	1.37
C.V. (%)	49.70	41.72	90.70	76.51	59.33	80.67

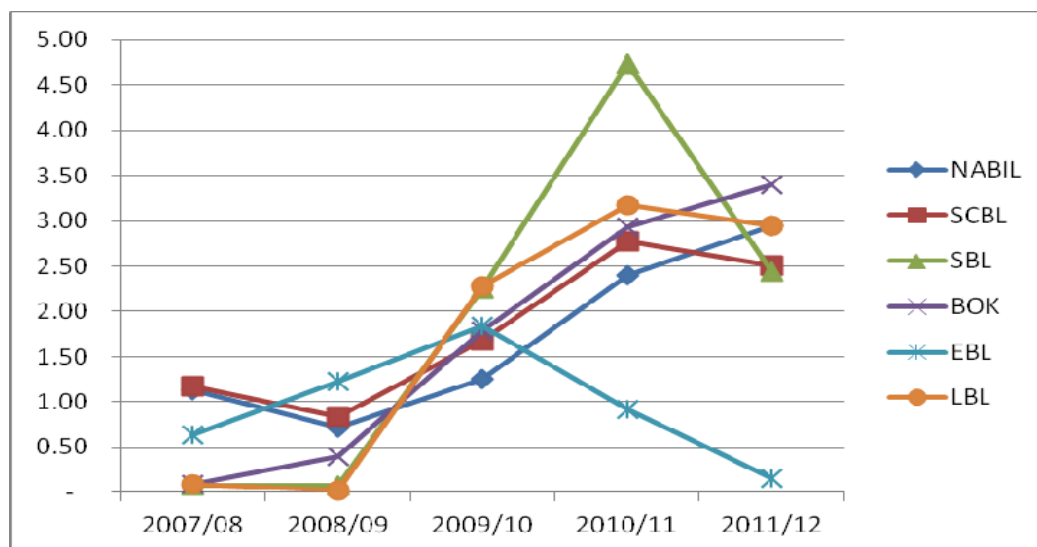
Source: Appendix I and II

The DY of NABIL range between 0.71% to 2.95% during the period of study. The average of DY is 1.69% The S.D. of the DY under the period of study 0.84. The C.V. of bank is 49.70 %, which indicators that the fluctuation of DY of NABIL is 49.70%. SCBL within the period of study has an average DY 1.79 % ranging between 0.83% to 2.78%. The S.D. is 0.75 where as C.V. 41.72 %. The C.V. indicates there is fluctuation of 41.72% in the dividend yield. SBL bank has an average DY of 1.92% within S.D. of 1.74%. The DY range between 0.07% to 4.74%. The C.V. shows that there is a fluctuation of 90.70% in dividend yield. EBL within the period of study has an average DY of 1.72% ranging between 0.09% to 3.39%. The S.D. is 1.32% where as C.V. is 76.51%. The C.V. indicates there is a fluctuation of 76.51%. During the period of study BOK has an average DY is 0.95% with a S.D. of 0.57. The DY range between 0.15 to 1.84%. The C.V. shows that there is a fluctuation of 59.33% in DY of BOK. The DY of LAXMI ranges between 0.02% to 3.17% during the period of study. The average DY. is 1.70% with a S.D. of 1.37. The C.V. shows that there is a fluctuation of 80.67% in the DY which is higher fluctuation.

Study result:

It can be seen that the average DY of SBL i.e. 1.92 is the highest and BOK i.e. 0.95 is the lowest which shows that, interpreting the market price of share the dividend payment by SBL sounds better rather than other banks but there is more fluctuation on the consistency of SBL. Regarding the consistency SCBL is more consistent in DY compare to other sample banks during the period of study.

**Figure 4.5**  
**DY of the Sample Banks**



#### 4.1.6 Analysis of P/E Ratio of Sample Banks

Price earning ratio reflects the price which is currently paid by the market for each rupees of price which is currently reported earning per share. The price earning ratio could be calculated by dividing the market price per share by earning per share.

**Table 4.6**  
**P/E Ratio of Sample Banks**

Banks \ Year	NABIL	SCBL	SBL	EBL	BOK	LAXMI
2007/08	45.53	51.77	63.04	39.21	34.11	67.66
2008/09	43.19	54.64	43.70	33.37	24.55	51.31
2009/10	28.45	42.23	20.19	19.50	16.27	23.63
2010/11	17.72	25.90	13.62	12.81	13.15	14.62
2011/12	16.21	24.78	16.91	16.58	11.67	15.78
Total	151.10	199.32	157.46	121.47	99.75	173.00
Mean	30.22	39.86	31.49	24.29	19.95	34.60
S.D.	12.31	12.56	19.00	10.19	8.37	21.19
C.V. (%)	40.75	31.50	60.32	41.95	41.94	61.25

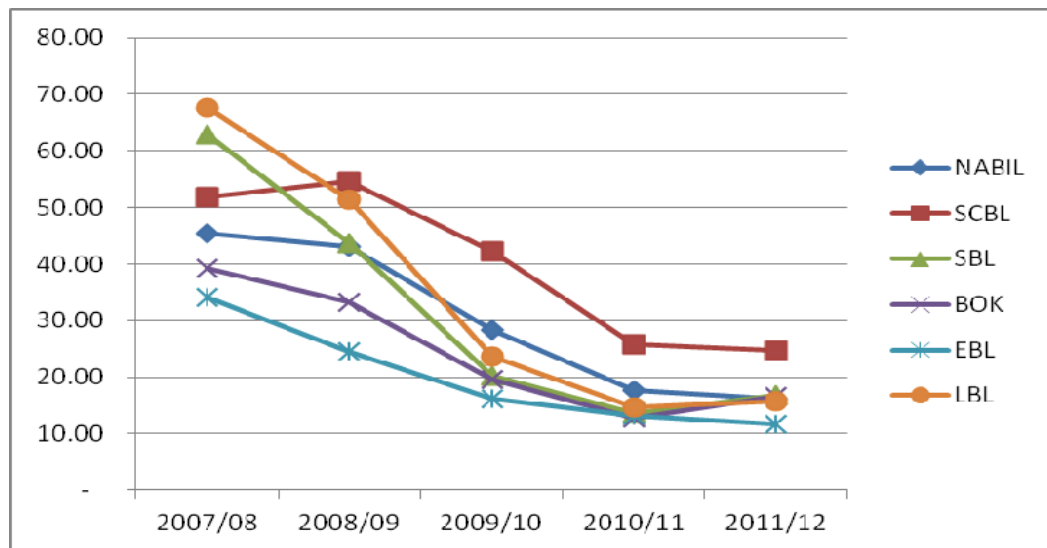
*Source: Appendix I and II*

P/E ratio of selected banks has been presented table 4.6 It is clear from the table that mean P/E ratio of SCBL i.e., 39.86 is the highest position throughout the study period where as BOK is lowest position with 19.95. Similarly LAXMI, SBL, NABIL and EBL are in 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> position with 34.60, 31.49, 30.22 and 24.29 times respectively.

Study result:

From the data of P/E ratio of sample banks, it can be seen that the mean P/E ratio of SCBL is highest while BOK has the lowest. Under C.V. criterion, SBL is the highest with 60.32 and C.V. of SCBL is lowest with 31.50. So the consistency in P/E is highest in SCBL over the period of study.

**Figure 4.6**  
**P/E Ratio of Sample Banks**



## 4.2 Statistical Tools

### 4.2.1 Correlation Analysis

The correlation analysis is generally used to describe the degree to which one variable is related to another. Hence, in statistics, it is used in order to depict the co-variation between two or more variable. It helps to determine whether a positive or a negative relationship exists. The positive correlation indicates that increase in value of one

variable leads to decrease in the value of the other. The correlation coefficient lies between +1 and -1. The +1 coefficient indicates that if the correlation coefficient is 0, it means that the variables are not related to each other. The number indicates the degree of correlation between the variable.

Correlation matrix for selected banks among seven variables has been presented bellows:

#### 4.2.1.1 Correlation between Financial Variable of NABIL

**Table 4.7**

**Correlation between Financial Variable of NABIL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.67	0.97	(0.02)	(0.75)	0.94
DPS	0.67	1.00	0.62	0.72	(0.19)	0.56
MPS	0.97	0.62	1.00	(0.08)	(0.85)	0.99
P.E.	0.02	0.18	-	0.30	0.08	0.01
6 x P.E.	0.09	1.11	-	1.80	0.51	0.03

*Source: Appendix III*

The table 4.7 indicates that the MPS of NABIL has high degree of positive correlation with its EPS, moderate positive correlation with its DPS, and perfectly positive correlation with itself. The MPS is low degree of negative correlation with its DY, moderate negative correlation with its DPR and high degree of positive correlation with its P/E ratio. The EPS is highly positive correlation with its MPS and moderate positive relationship with the DPS of NABIL. It has high degree of negative correlation with its DY, nearly high degree positive correlation with its P/E ratio and perfectly positive correlation with itself. The DPS has moderate degree of positive correlation with its MPS.

Study result:

The correlation of NABIL between MPS and EPS, MPS and DPS, and MPS and P/E ratio are greater than probable error (P.E). So, nothing can be concluded. The correlation between MPS and DPR and MPS and DY is less then P.E, so it is insignificant. Again the correlation between MPS and DPS, MPS and DPR and MPS and DY ratio are less than 6 × P.E. So it is also nothing can be concluded, the

correlation between MPS and EPS and MPS and P/E ratio is greater than  $6 \times P.E.$ , so it is significant.

#### 4.2.1.2 Correlation between Financial Variable of SCBL

**Table 4.8**  
**Correlation between Financial Variable of SCBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.80	0.97	(0.60)	(0.83)	0.85
DPS	0.80	1.00	0.72	(0.00)	(0.49)	0.57
MPS	0.97	0.72	1.00	(0.65)	(0.93)	0.95
P.E.	0.02	0.15	-	0.17	0.04	0.03
$6 \times P.E.$	0.09	0.88	-	1.04	0.24	0.18

*Sources: Appendix III*

The above table indicates that MPS of SCBL have high degree of positive correlation with its EPS and P/E ratio, moderate high positive correlation with its DPS and perfectly positive correlation with itself. The MPS of SCBL has high degree of negative correlation with its DY, and moderate negative correlation with its DPR. The EPS of SCBL has moderate positive correlation with its DPS and P/E ratio and high degree of positive relationship with MPS. The EPS has moderate negative correlation with its DPR and DY. The DPS of SCBL has moderate degree of positive correlation with its EPS and MPS, low degree of positive correlation with its P/E ratio and perfectly positive correlation with itself. The DPS has high degree of negative correlation with its DY.

Study result:

The correlation of SCBL between MPS and EPS, MPS and DPS, and MPS and P/E are greater than probable error (P.E) so, nothing can be concluded and MPS and DY and MPS and DPR are less than probable error (P.E) so, it is significant. Again correlation between MPS and DPS, MPS and DPR, MPS and DY is less than  $6 \times P.E.$  hence, nothing can be concluded. The correlation between MPS and EPS and MPS and P/E ratio are greater than  $6 \times P. E.$  So it is significant.

#### 4.2.1.3 Correlation between Financial Variable of SBL

**Table 4.9**  
**Correlation between Financial Variable of SBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.12	(0.18)	0.07	0.00	(0.41)
DPS	0.12	1.00	(0.97)	1.00	0.96	(0.92)
MPS	(0.18)	(0.97)	1.00	(0.97)	(0.92)	0.97
P.E.	0.29	0.02	-	0.02	0.05	0.02
6 x P.E.	1.75	0.11	-	0.12	0.28	0.11

*Sources: Appendix III*

The above table shows that MPS of SBL has high degree of negative correlation with its P/E ratio and high degree of negative correlation with its DPS, DPR and DY. MPS has low degree of negative relationship with EPS. The EPS has low degree positive correlation with its DPS and DPR and no correlated with DY. The DPS has high degree of positive correlation with its DPR and DY, the DPS has low degree of negative correlation with its MPS and P/E ratio. The correlation of SBL, MPS with MPS, EPS with EPS and DPS with DPS are respectively positive correlation.

Study result:

The correlation of SBL between MPS and P/E ratio are greater than probable error (P.E.). So, there nothing can be concluded. The correlation between MPS and EPS, MPS and DPS, MPS and DPR and MPS and DY are less than probable error (P.E). So here it is insignificant. The correlation between MPS and P/E ratio are greater than 6 × P.E, so it is significant. The correlation between MPS and EPS, MPS and DPS, MPS and DPR and MPS and P/E ratio are less than 6×P.E. So here also nothing can be concluded.



#### 4.2.1.4 Correlation between Financial Variable of EBL

Table 4.10

Correlation between Financial Variable of EBL

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.87	0.46	0.83	0.67	0.34
DPS	0.87	1.00	0.59	1.00	0.84	0.49
MPS	0.46	0.59	1.00	0.61	0.11	0.99
P.E.	0.24	0.20	-	0.19	0.30	0.01
6 x P.E.	1.43	1.19	-	1.13	1.79	0.03

Sources: Appendix III

From the above table it is found that the MPS of EBL has high degree of positive correlation with its P/E ratio and low degree of positive correlation with its DY. The MPS has moderate degree of positive correlation with its EPS, DPS and DPR. The EPS of EBL has low positive correlation with its P/E ratio and high degree of positive correlation with itself along with DPS and DPR. The EPS has moderate degree of positive correlation with MPS and DY. The DPS of EBL has high degree of positive correlation with its EPS, DPR and DY and moderate positive correlation with the MPS and P/E ratio. The correlation of EBL, MPS with MPS, EPS with EPS and DPS with DPS are perfectly positive.

Study result:

The correlation of EBL between MPS and EPS, MPS and DPS, MPS and DPR and MPS and P/E ratio is greater than probable error (P.E), So here nothing can be concluded. The correlation between MPS and DY is less than probable error (P.E.), so, it is significant. Again the correlation between MPS and P/E ratio are greater than 6x P.E so it is significant. The correlation between MPS and EPS, MPS and DPS, MPS and DPR and MPS and DY are less than 6x P.E, so there nothing can be concluded.

#### 4.2.1.5 Correlation between Financial Variable of BOK

Table 4.11

##### Correlation between Financial Variable of BOK

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	(0.99)	0.96	(0.99)	(0.94)	0.92
DPS	(0.99)	1.00	(0.97)	1.00	0.97	(0.94)
MPS	0.96	(0.97)	1.00	(0.93)	(0.94)	0.99
P.E.	0.02	0.02	-	0.04	0.03	0.00
6 x P.E.	0.15	0.12	-	0.24	0.20	0.02

Sources: Appendix III

The above table indicates that the MPS of BOK has high degree of positive correlation with its EPS and P/E ratio. The MPS has high degree of negative correlation with its DPS, DY and DPR. The EPS of BOK has high degree of positive correlation with its MPS and P/E ratio and perfectly positive correlation with itself. The EPS has high degree of negative correlation with its DY, DPR and DPS. The DPS of BOK has high degree of positive correlation with its DY and perfectly positive correlation with itself and DPR. The DPS has high degree of negative correlation with its P/E ratio, EPS and MPS.

Study result:

The correlation between MPS and EPS, MPS and P/E ratio are greater than probable error (P.E) so there nothing can be concluded. The correlation between MPS and DPS, MPS and DPR, MPS and DY are less than probable error (P.E), so it is significant. The correlation between MPS and EPS, MPS and P/E ratio are greater than 6x P.E. So it is significant. Again the correlation between MPS and DPS, MPS and DPR and MPS and DY is less than 6x P.E., So also nothing can be concluded.

#### 4.2.1.6 Correlation between Financial Variable of LAXMI

Table 4.12

Correlation between Financial Variable of LAXMI

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.82	(0.75)	0.79	0.74	(0.87)
DPS	0.82	1.00	(0.90)	1.00	0.92	(0.90)
MPS	(0.75)	(0.90)	1.00	(0.92)	(1.00)	0.98
P.E.	0.13	0.06	-	0.04	0.00	0.01
6 x P.E.	0.80	0.33	-	0.26	0.02	0.09

Sources: Appendix III

The above table indicate that MPS of LAXMI has high degree of positive correlation with it's P/E ratio and it is perfectly positive correlation with itself. The MPS of LAXMI has moderate negative correlation with its EPS and high degree of negative correlation with its DPS, DPR and DY. The EPS of LAXMI has moderate positive correlation with its DPR, DPS and DY. The EPS has perfectly positive correlation with itself and moderate negative relation with its MPS and P/E ratio. The DPS of LAXMI has high degree of positive correlation with its DPR and DY and perfectly positive correlation with itself. The DPS has high degree negative correlation with its MPS and P/E ratio.

Study result:

The correlation between MPS and P/E ratio are greater than probable error (P.E.), so nothing can be concluded. The correlation between MPS and EPS, MPS and DPS, MPS and DPR, MPS and DY is less than probable error (P.E), so it is significant. MPS and P/E ratio are greater than 6× P.E, so it is significant. Again the correlation between MPS and EPS, MPS and DPS, MPS and DPR and MPS and DY are less than 6× P.E, so here nothing can be concluded.

#### 4.2.2 Regression Analysis

The regression analysis is used to determine the statistical relationship between two or more variables and to make predication of one variable on the basis of the others. The regression analysis can either be simple regression or multiple regression. When we take only one independent to predict the value of the dependent variable through the appropriate regressions time then the analysis is known as simple regression analysis. But the analysis performed by the use of two more independent variable is known as multiple regression analysis.

##### 4.2.2.1 Regression Analysis between MPS on EPS

**Table 4.13**

**Regression Analysis between MPS on EPS**

Bank	a	b	r <sup>2</sup>	S.E.E.	S.b
NABIL	(5,723.27)	93.68	0.95	508.69	12.67
SCBL	(3,792.50)	83.78	0.95	617.69	11.27
SBL	1,285.66	(32.02)	0.03	437.70	101.20
EBL	(3,345.87)	56.23	0.21	932.35	63.23
BOK	(2,831.85)	84.85	0.92	264.99	14.68
LAXMI	2,698.74	(94.92)	0.56	291.68	48.84

*Sources: Appendix IV*

The table 4.13 of regression analysis shows that regression constant (a), regression coefficient (b), coefficient of determination ( $r^2$ ) between MPS on EPS of SCBL, NABIL, SBL, EBL, BOK and LAXMI. The regression constants are (3792.50), (5723.27), 1285.66, (3345.87), (2831.85), and 2698.74 of SCBL, NABIL, SBL, EBL, BOK and LAXMI respectively. The regression coefficients are 93.68, 83.78, ((32.02)), 56.23, 84.85 and (94.92) of NABIL, SCBL, SBL, EBL, BOK and LAXMI respectively.

The standard error of estimate (SEE) of NABIL, SCBL, SBL, EBL, BOK AND LAXMI are 508.69, 617.69, 437.70, 932.35, 264.99 and 291.68 respectively. The S.b. of NABIL SCBL, SBL, EBL, BOK and LAXMI are 12.67, 11.27, 101.20, 63.23, 14.68 and 48.84 respectively. These values indicate the probable error in the predicates value for the respective banks.

Study result:

The coefficient of determination ( $r^2$ ) is lowest for EBL 0.03 which indicates that only 3% in MPS is explained by EPS i.e. 3% variation in MPS of the banks is explained due to the change in value of EPS of the bank. The value of  $r^2$  of NABIL, SCBL SBL, BOK, and LAXMI are 0.95, 0.95, 0.21, 0.92 and 0.56 respectively which indicate that 95%, 95%, 21%, 92% and 56% variation in the MPS of these banks are explained by to the change in EPS of the respective banks.

#### 4.2.2.2 Regression Analysis between MPS on DPS

**Table 4.14**

**Regression Analysis between MPS on DPS**

Bank	a	b	r <sup>2</sup>	S.E.E.	S.b
NABIL	(729.33)	96.47	0.39	1,746.19	70.13
SCBL	236.82	66.19	0.52	2,310.54	83.27
SBL	(387.15)	154.93	0.94	788.56	71.72
EBL	(109.96)	108.03	0.34	373.99	14.96
BOK	(297.89)	123.14	0.94	1,352.27	87.96
LAXMI	(427.45)	158.47	0.82	788.12	66.56

*Sources: Appendix IV*

The above regression analysis of MPS on DPS shows that among the banks under study, all sample banks have positive regression relation between MPS and DPS of the banks. The regression relation between MPS and DPS of banks indicate that with an increase of Rs 1 in DPS the MPS will increased by Rs 66.19, 96.47, 154.93, 108.03, 123.14 and 158.47 respectively with an increase on DPS by Rs 1 assuming that the other variables are constant.

The standard error of estimate of NABIL, SCBL, SBL, EBL, BOK and LAXMI are Rs 1746.19, 2310.54, 788.56, 373.99, 1352.27 and 788.12 respectively. The standard error of b (S.b.) of NABIL, SCBL, SBL, EBL, BOK and LAXMI are 70.13, 83.27, 71.72, 14.96, 87.96 and 66.56 respectively. These values indicates the probable error in the predicated values for the respective banks there S.E. of b is lowest in EBL (i.e. 14.96) which shows the estimation of DPS can be predicted nearer to accuracy.

Study result:

The coefficient of determination ( $r^2$ ) is lowest for EBL (0.34) which indicates that only 34% variances in the MPS is explained by DPS i.e. 34% variation in MPS of the bank is explained due to the change in value of DPS of the bank the coefficient of determination is highest in case of SBL and BOK (0.94). This indicates that 94% in variation in MPS of SBL and BOK is explained due to change in the DPS of the bank. The value of  $r^2$  of NABIL, SCBL and LAXMI are 0.39, 0.52 and 0.82 respectively, which indicate that 39%, 52% and 82% variation in the MPS of these banks are explained due to change in DPS of the respective banks.

#### 4.2.2.3 Regression analysis between MPS on DPR

**Table 4.15**

**Regression Analysis between MPS on DPR**

Bank	a	b	r <sup>2</sup>	S.E.E.	S.b
NABIL	3,813.31	(18.69)	0.01	2,222.24	129.87
SCBL	(654.05)	73.95	0.42	3,003.37	141.28
SBL	657.88	(0.88)	0.93	431.52	8.02
EBL	(91.74)	102.60	0.38	412.41	16.92
BOK	(3,948.37)	178.10	0.87	2,131.56	51.06
LAXMI	700.06	(0.49)	0.85	431.86	8.66

Sources: Appendix IV

The regression analysis between MPS and DPR shows positive relation between MPS and DPR of SCBL, EBL and BOK. The regression relation between MPS and DPR of SCBL, EBL and BOK indicates that with an increase of 1% in DPR, the MPS will increase by Rs 73.95, 102.60 and 178.10 respectively, assuming that the other variables constant in the other hand the regression analysis between MPS and DPR of NABIL, SBL and LAXMI which indicates that with an increase in 1% in DPR the MPS of NABIL, SBL and LAXMI will decrease by Rs 18.69, 0.88 and 0.49 respectively, assuming that other variables are constant.

The standard error of estimate of NABIL, SCBL, SBL, EBL, BOK and LAXMI are Rs. 2222.24, 3003.37, 431.52, 412.41, 2131.56 and 431.86 respectively. The standard error of b (S.b.) of NABIL, SCBL, SBL, EBL, BOK and LAXMI are Rs. 129.87,

141.29, 8.02, 16.92, 51.06 and 8.66 respectively which indicate the possible error in the predicated value for the respectively banks. Here S.E. of b is lowest in SBL i.e. 8.02 and LAXMI i.e. 8.66, which shows the estimation of DPR can be predicated nearer to accuracy.

Study result:

The coefficient of determination ( $r^2$ ) is lowest for NABIL i.e. 0.01 which indicates that only 1% in MPS is explained by DPR i.e. 1% variation in MPS of the bank is explained due to the change in the value of DPR of the bank. The coefficient determination is highest in case of SBL which indicates that 93% variation in MPS of SBL is due to the change of DPR of the bank. The value of  $r^2$  of SCBL, EBL, BOK and LAXMI are 0.42, 0.38, 0.87 and 0.85 respectively which indicates that 42%, 38%, 87% and 85% variation in the MPS of these banks are explained due to the change in DPR of the respective banks.

#### 4.2.2.4 Regression Analysis between MPS on DY

**Table 4.16**

**Regression Analysis between MPS on DY**

Bank	a	b	r <sup>2</sup>	S.E.E.	S.b
NABIL	5,978.50	(1,741.16)	0.72	1,183.41	629.45
SCBL	(29.89)	2,217.41	0.87	3,582.32	2,142.72
SBL	(90.95)	375.86	0.85	737.11	189.54
EBL	(6.32)	1,966.32	0.01	967.60	764.84
BOK	(47.31)	748.83	0.89	1,400.95	475.39
LAXMI	(66.48)	441.31	0.99	730.62	237.87

Sources: Appendix IV

The above table of regression analysis shows that NABIL have negative regression relation between MPS on DY, MPS of NABIL will decrease by Rs.1741.16 with an change in DY by 1% assuming that other variables are constant. Similarly, SCBL, SBL, EBL, BOK and LAXMI has positive regression relation between MPS on DY and MPS of SCBL, SBL, EBL, BOK and LAXMI will increase by Rs. 2217.41, 375.86, 1966.32, 748.83 and 441.31 with change in DY by 1% assuming that other variable are constant.

The standard error of estimate of NABIL, SCBL, SBL, EBL, BOK and LAXMI are Rs.1183.41, 3582.32, 737.11, 967.60, 1400.95 and 730.62 respectively. The standard error of b (S.b.) of NABIL, SCBL, SBL, EBL, BOK and LAXMI are Rs.629.45, 2142.72, 189.54, 764.84, 475.39 and 237.87 respectively. The values indicate the probable error in the predicated value for the respective banks. Here S.E. of b lowest in SBL, which shows the estimation of DY can be predicated nearer to accuracy.

Study result:

The coefficient of determination ( $r^2$ ) is lowest for EBL i.e. 0.01 which indicates that only 1% in MPS is explained by D.Y i.e. 1% variation in MPS of the banks is explained due to the change in value of DY of the banks. The value of  $r^2$  of NABIL, SCBL, SBL, BOK and LAXMI, 0.72, 0.87, 0.85, 0.89 and 0.99 respectively which indicate that 72%, 87%, 85%, 89% and 99% variation in the MPS of these banks are explained due to change in DY of the respective banks.

#### 4.2.2.5 Regression Analysis between DPS on EPS

**Table 4.17**

**Regression analysis between DPS on EPS**

Bank	a	b	r <sup>2</sup>	S.E.E.	S.b
NABIL	(0.01)	0.42	0.45	10.64	0.26
SCBL	18.73	0.40	0.64	9.67	0.18
SBL	0.54	0.29	0.01	6.31	1.46
EBL	(117.96)	1.47	0.75	7.20	0.49
BOK	52.98	(0.84)	0.98	1.27	0.07
LAXMI	(27.46)	1.63	0.67	3.91	0.66

*Sources: Appendix IV*

The regression analysis between DPS and EPS show that among the bank under study, NABIL, SCBL, SBL, EBL and LAXMI have positive relation but only BOK have negative relation between DPS and EPS. The regression relation between DPS and EPS indicates that with an increase of Rs.1 and EPS, there will be increase in DPS of NABIL, SCBL, SBL, EBL and LAXMI by Rs.0.42, 0.40, 0.29, 1.47 and 1.63 respectively. On the other hand BOK will decrease by Rs.0.84 respectively.



The standard error of estimate of NABIL, SCBL, SBL, EBL, BOK and LAXMI are 10.64, 9.67, 6.31, 7.20, 1.27 and 3.91 respectively. The standard error of b (S.b.) are of NABIL, SCBL, SBL, EBL, BOK and LAXMI are 0.26, 0.18, 1.46, 0.49, 0.07 and 0.66 respectively. These values indicates the possible error in the predicated value for the respective banks. Here S.b. is lowest in SCBL and BOK which shows the estimation of EPS can be predicated nearer to accuracy.

Study result:

The coefficient of determination ( $r^2$ ) is lowest for SBL i.e. 0.01 which indicate that only 1% in DPS is explained due to the change in value of EPS of the bank. The value of  $r^2$  of NABIL, SCBL, EBL, BOK and LAXMI are 0.45, 0.64, 0.75, 0.98 and 0.67 respectively which indication that 45%, 64%, 75%, 98% and 67% variation in the DPS of these bank are explained due to change in EPS of the respective banks.

#### **4.2.3 Multiple Regression Analysis**

To see the impact of more than one independent variable the multiple regressions have been used. It examines the relationship between one dependent variable and more independent variables. The market price of stock depends on more than one variable. So, the results of simple regression analysis are not reliable as far the multiple regression analysis eliminates all the limitations of simple regression analysis. This part of the study is designed to examine the relationship between two independent variables and one dependent variable. The regression results are presented. As, in this study, the pooled average data of the observed banks are used for multiple regression and coefficient of determination analysis.

1. Multiple regression and coefficient of Determination Analysis of MPS on EPS and DPS;

The model developed for this purpose;

$$y = a + b_1X_1 + b_2X_2$$

Where,

Y = market price per share (Dependent variables)

X<sub>1</sub> = Earning per share (Independent variables)

$X_2$  = Dividend per share (Independent variables)

$a_1$  = Regression Constant

$b_1$  &  $b_2$  = Coefficient of Net Regression (or Simply regression constant)

Multiple Regression and coefficient of determination Analysis of MPS or EPS and DPS.

**Table 4.18**

**Multiple Regression and Coefficient of Determination Analysis of MPS or EPS and DPS**

Regression Model	$a_1$	$b_1$	$b_2$	$S_{y.12}$	$(R_{y.12})^2$
$Y = a + b_1X_1 + b_2X_2$	(5,723.76)	97.62	(9.42)	610.57	0.95

Sources: Appendix V

The above table shows the output of multiple regression analysis between MPS (Y) and other variables (EPS ( $X_1$ ) and DPS ( $X_2$ )) of the banks in average. The regression constant ( $a_1$ ) is (4,447.77) that indicate that when EPS and DPS equal to zero, then MPS of the observed banks would be Rs.4,447.77. The regression coefficient  $b_1$ , for banks is 94.44. Another regression coefficient  $b_2$  is (31.73). EPS has positive impact in MPS where as another independent variable DPS has negative impact in MPS of the observed banks in average. As the coefficient of multiple determinations  $(R_{y.12})^2$  is 0.95 it means 95% of variation in MPS is explained by variation in EPS and DPS. The standard error of estimation ( $S_{y.12}$ ) is 560.25, it indicates that the possible error in the predicated value for the respective banks.

Multiple Regression and Coefficient of Determination Analysis of MPS on EPS and DPR

The model developed for this purpose is as;

$$Y = a + b_1X_1 + b_2X_2$$

Where,

Y = Market price per share (Dependent variable)

$X_1$  = Earning per share (in dependent variable)

$X_2$  = Dividend payout ratio (independent variable)

$a_1$  = Regression constant

$b_1$  &  $b_2$  = Coefficient of net regression (or simply, regression constant)

The following results have been obtained from the multiple.

Multiple Regression and Coefficient of Determination Analysis of MPS on EPS and DPR.

**Table 4.19**  
**Multiple Regression and Coefficient of Determination Analysis of**  
**MPS on EPS and DPR**

Regression Model	$a_1$	$b_1$	$b_2$	$S_{y.12}$	$(R_{y.12})^2$
$Y = a + b_1X_1 + b_2X_2$	(5,091.24)	93.57	(14.90)	596.12	0.95

*Sources: Appendix V*

The above table shows the output of multiple regression analysis between MPS (Y) and other variables EPS( $X_1$ ) and DPR ( $X_2$ ) of the banks in average. The regression constant ( $a_1$ ) is (2,740.06). The regression coefficient  $b_1$  for bank is 79.33, another regression coefficient  $b_2$  is (37.47). EPS has positive impact in MPS where as another independent variable DPR has negative impact in MPS of the observed banks in average. As the coefficient of multiple determination.  $(R_{y.12})^2$  is 0.94 it means 94% of variation in MPS is explained by variation in EPS and DPR. The standard Error of estimation ( $S_{y.12}$ ) is 625.79 it indicates that the possible error in the predicated value for the respective banks.

### 4.3 Test of Hypothesis

To test the significance difference among mean value of EPS, DPS, MPS, DPR, Dividend yield and PLE ratio in the sample banks, there are altogether six sets of hypothesis formulated and then tested in the study. Under the first set, significant differences among DPS of the banks are tested. The same are tested for EPS, MPS, DPR, DY and P.E. ratio respectively.

#### First set of Hypothesis

$H_{01}$  : There is no significance difference among mean value of DPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

$H_{11}$  : There is a significance difference among mean value of DPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.20**  
**Result of Hypothesis Regarding DPS**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	19.12
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

The above table 4.20 shows that prob. value of F-statistic is less than calculated value of F-statistic which implies that F-static is significant at 5% level of significance. That means null hypothesis is rejected and alternative hypothesis is accepted. It reveals that the Dividend per Share among the banks is not same but they are significantly different.

**Second set of Hypothesis**

Null Hypothesis ( $H_{02}$ ) : These is no significance different among mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

Alternative Hypothesis ( $H_{12}$ ) : There is significance different many mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.21**  
**Result of Hypothesis Regarding EPS**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	29.63
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

Table 4.21 conclude that prob. value of F-statistic is less than calculated value of F-statistic which implies that F-statistic is significant at 5% level of significance. That means null hypothesis is rejected and alternative hypothesis is accepted. It reveals that the Earning per Share among the banks is not same but they are significantly different.

**Third set of Hypothesis**

H<sub>03</sub> : There is no significance difference among mean value of MPS of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

H<sub>13</sub> : There is significance difference among mean value of MPS of NIBL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.22**  
**Result of Hypothesis Regarding MPS**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	4.88
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

When observe in the table 4.22, it is clear that the prob. value of F- statistic is less than calculated value of F-Statistic is less than calculated value of F-statistic. It implies that the F-statistic is significant at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that the market price per share among the banks is not same but they are significantly different.

**Fourth Set of Hypothesis**

H<sub>04</sub> : There is no significance difference among mean value of DPR of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

H<sub>14</sub> : There is no significance difference among mean value of DPR of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.23**  
**Result of Hypothesis Regarding DPR**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	3.10
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

Result of Hypothesis regarding DPR show in the table 4.23, it is clear that the prob. value of F-statistic less than calculated value of F-statistic. It implies that the F-statistic is significant at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means the Dividend payout Ratio among the banks is not same but they are significantly different.

**Fifth set of Hypothesis:**

H<sub>05</sub> : There is no significance difference among mean value of Dividend yield (D.Y) of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

H<sub>15</sub> : There is significance difference among mean value of Dividend Yield (DY) of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.24**  
**Result of Hypothesis Regarding D.Y**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	0.34
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

From the table 4.24, we can conclude the result of hypothesis regarding Dividend yield among banks. From the table 4.24, we can conclude that the F-Statistic is significant at 5% level of significance with prob. value 2.62. Hence, null hypothesis is accepted and alternative hypothesis is rejected which implies that there is similarity among the banks Dividend yield.

**Sixth set of Hypothesis:**

$H_{06}$  : There is no significance difference among mean value of P/E ratio of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

$H_{16}$  : There is significance difference among mean value of P/E ratio of NABIL, SCBL, SBL, EBL, BOK and LAXMI.

**Table 4.25**  
**Result of Hypothesis Regarding P/E ratio**

Particulars	
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	0.94
Prob. value of F-Statistic	2.62

*Sources: Appendix VI*

Table 4.25, present the result of hypothesis regarding price earning ratio among sample banks. As we see from the table 4.25 that prob. value of F-statistic is 2.62 which is more than calculated value of F-statistic at 5% level of significance. Hence null hypothesis is accepted and alternative hypothesis is rejected. It implies that there is similarity among the banks price earning ratio.

#### 4.4 Major Findings

This section includes the key findings of the study obtained from the analysis of data. Conclusion derives from the findings are presenting in the next chapter.

- The average EPS of NABIL is the highest i.e. Rs. 93.47 and average EPS of SBL is the lowest i.e. Rs. 20.48 under the period of study. The C.V. of SCBL is higher among the sample bank i.e. 26.55 % and EBL has lowest i.e. 7.11 % among the sample banks. It indicates that EBL has the most consistent EPS among all sample banks during the period of study. The C.V. of SCBL is higher among the sample bank and EBL has lowest among the sample banks. It indicates that EBL has the most consistent EPS among all sample banks during the period of study.
- The average DPS of SCBL is highest i.e. Rs. 56 than other sample banks and the lowest C.V. is 22.16 % i.e. of SCBL and highest C.V. is 75.43% i.e. of SBL which indicates that there is high consistency and stability on dividend payment in SCBL and no consistency in case of SBL.
- Higher DPR indicates that the firm is paying higher dividend to its shareholders and lower Dividend payout ratio implies that the firm is retaining its profit to profitable investment opportunities. It can be seen that an average DPR of SCBL is higher i.e. 62.17 among the all bank and its C.V. i.e 15.29 % has also lowest among all banks under study. It shows SCBL follows constant dividend payout ratio compare to other sample banks during the period of study. Regarding the C.V. criterion SBL is highly inconsistent in dividend payment.
- The average MPS of SCBL is Rs. 3943.60 which is the highest among all the other sample banks, it means the SCBL is able to retain the faith of general public and investor regarding the investment and return during the period of study. There is consistency on the MPS of EBL as it has lowest C.V. i.e. 43.44 % among all other banks.
- It can be seen that the average DY of SBL i.e. 1.92 is the highest and BOK i.e. 0.95 is the lowest which shows that, interpreting the market price of share the dividend payment by SBL sounds better rather than other banks but there is more fluctuation on the consistency of SBL. Regarding the consistency SCBL is more consistent in DY compare to other sample banks during the period of



study. Dividend yield defined the relationship between dividend per share and market value per share. It is very useful for the investors.

- From the data of P/E ratio of sample banks, it can be concluded that the mean P/E ratio of SCBL is highest while BOK has the lowest. Under C.V. criterion, SBL is the highest with 60.32 and C.V. of SCBL is lowest with 31.50. So the consistency in P/E is highest in SCBL over the period of study.
- Correlation matrix of selected banks shows that correlation between DPS and MPS is positive in NABIL, SCBL and EBL. It implies that there is a positive impact of dividend of market price of stock. It means if dividend increase, market price of share also increases and vice-versa. Correlation between DPS and MPS in SBL, BOK and LAXMI is negative. It implies that there is a negative impact of dividend on market price of stock. It means if dividend increase, market price of stock decrease and vice-versa. Correlation between EPS and MPS is positive in NABIL, SCBL, EBL and BOK and negative correlation between EPS and MPS in SBL and LAXMI. Similarly correlation between MPS and DPR is positive in EBL and negative in NABIL, SCBL, SBL, BOK and LAXMI. Whereas correlation between MPS and DY is negative in NABIL, SCBL, SBL, BOK and LAXMI but positive in EBL. The correlation between MPS and P/E ratio is positive in NABIL, SCBL, SBL, EBL, BOK and LAXMI.
- The coefficient of determination ( $r^2$ ) is lowest for EBL 0.03 which indicates that only 3% in MPS is explained by EPS i.e. 3% variation in MPS of the banks is explained due to the change in value of EPS of the bank. The value of  $r^2$  of NABIL, SCBL SBL, BOK, and LAXMI are 0.95, 0.95, 0.21, 0.92 and 0.56 respectively which indicate that 95%, 95%, 21%, 92% and 56% variation in the MPS of these banks are explained by to the change in EPS of the respective banks.
- The coefficient of determination ( $r^2$ ) is lowest for EBL (0.34) which indicates that only 34% variances in the MPS is explained by DPS i.e. 34% variation in MPS of the bank is explained due to the change in value of DPS of the bank the coefficient of determination in highest in case of SBL and BOK (0.94). This indicates that 94% in variation in MPS of SBL and BOK is explained due to changed in the DPS of the bank. The value of  $r^2$  of NABIL, SCBL and LAXMI

are 0.39, 0.52 and 0.82 respectively, which indicate that 39%, 52% and 82% variation in the MPS of these banks are explained due to change in DPS of the respective banks.

- The coefficient of determination ( $r^2$ ) is lowest for NABIL i.e. 0.01 which indicates that only 1% in MPS is explained by DPR i.e. 1% variation in MPS of the bank is explained due to the change in the value of DPR of the bank. The coefficient determination is highest in case of SBL which indicates that 93% variation in MPS of SBL is due to the change of DPR of the bank. The value of  $r^2$  of SCBL, EBL, BOK and LAXMI are 0.42, 0.38, 0.87 and 0.85 respectively which indicates that 42%, 38%, 87% and 85% variation in the MPS of these banks are explained due to the change in DPR of the respective banks.
- The multiple regression analysis of MPS on EPS and DPS shows that the regression coefficient ( $b_1$ ) is positive, which is shown from pooled average analysis of multiple regressions. EPS has positive impact in MPS whereas another independent variable DPS has negative impact in MPS of the observed banks in average. As the coefficient of multiple determinations ( $(R_{y.12})^2$ ) is 0.95 it means 95% of variation in MPS is explained by variation in EPS and DPS. The standard error of estimation ( $S_{y.12}$ ) is 560.25, it indicates that the possible error in the predicted value for the respective banks.
- From the test of hypothesis, it is found null hypothesis at 5% level of significance of EPS, DPS, MPS and DPR among selected banks are rejected, it means the EPS, DPS, MPS and DPR among the banks is not same but they are significantly different and whereas null hypothesis of DY and P/E ratio is accepted which implies that the sample banks have no significant difference in DY and P/E ratio during the period of study.

## **CHAPTER - V**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

This chapter focuses on summarizing the study held with the conclusions and some recommendation on the basis of findings. For this purpose, the chapter has been divided into three parts as summary, conclusion and recommendation.

#### **5.1 Summary**

The study was conducted with objectives to analyze the dividend practices and its impact on market price of stock of selected Nepalese commercial banks over the study period 2007/08 to 2011/12 following a descriptive and analytical research design. The sample for the study of six commercial banks listed in Nepal Stock Exchange (NEPSE). The Study is based on secondary data and the data obtained were analyzed using various descriptive statistical tools, correlation analysis and multiple regression models and various financial tools.

Dividend services as simple, comprehensive signal of management's interpretation of the firm's recent performance and its future prospects. Dividend policy constitutes one of the most critical issues of the public limited companies. Dividend policy decision is one of the major decisions of financial management. The dividend policy decision affects on the operation and prosperity of the organization because it has the power to influence other two decision of the organization i.e. capital structure decision and investment decisions.

Theories of dividend policies do differ some prefer resident theories that convey passive residual earning available for payment whereas M.M. Hypothesis insists on dividend irrelevance in the sense that dividend does not affect the stock price. There are other who argue that dividend policy does affect value to the factors of uncertainty. Many factors affect the dividend payment depending upon investors need and preference on one hand and the financing need of the financial institutions potential investment opportunities on the other hand. Dividend policy involves many

aspects such as selecting the types of dividend and other forms as well as selecting stable or fluctuating or extra dividend payment.

The stockholders have a high desire and expectation that market price of share will be higher than net worth and getting high percent of dividend from earning. So distributing dividend to the share holder is effective way to achieve the trust of investors and encourage them to invest in shares. Besides this dividend paying ability reflects the financial position of the organization in the market. So the funds that could not be used due to the lack of investment opportunities would be better as dividend. Since share holders have investment opportunities elsewhere.

Dividend paying banks have been selected for the study, so the references can be made about implication of dividend policy they have adopted in their market price per share. Even if market price is governed by various factors, this study is made to analyze one of the important fact i.e. Dividend. The study covers six commercial banks and only for last five fiscal years from 2006/07 to 2010/11. The available secondary data have been analyzed using various financial and statistical tools. So, the reliability of the conclusion of this study is determined on the accuracy of secondary data.

To make the study more reliable, different types of analysis have been conducted to find out the appropriate relationship between market price and other Variables, which affect the dividend. The theoretical statement is to study of the impact of dividend on stock price, therefore it is concluded that none of the sample firm have adopted consistent dividend policy except SCBL. More or less the dividend policy depends on the earning per share of the company: the earning per share and dividend per share having the positive relation may also impact on market price of stock.

## **5.2 Conclusions**

Based on major findings, this study concludes that there is higher dividend impact on market value of the banks share in most of the banks. In another words, dividend plays an important role to change the market price of stock. Besides this, the following conclusions are made;

The market price per share is affected by the dividend related financial variable i.e. DPS and DPR either positively or negatively changes are DPS affected the market price per share differently in different bank. In case of some banks, there exist positive relation between dividend and MPS while for other there exists negative relation besides the MPS. Largely depends upon the dividend which been shown by the coefficient of multiple determination. Besides dividend other factors also affected the market price per share i.e. EPS, DY P/E ration etc. Their effect is also different for different banks.

An analysis of the average DPR of the sample banks shows that out of the total income generated 62.17% is distributed as dividend in general if the individual DPR of the banks are compared to this figure. SCBL has the average DPR of all banks. The individually average DPR of EBL has 19.11% which is less than the average DPR of all banks. The individually average DPR of EBL has 19.11% which is less than other sample banks. On the other hand the average DPR of NABIL, SBL, BOK and LAXMI are 41.75%, 31.88%, 29.15%, and 30.87% respectively.

The coefficient of variation of the average DPR of the banks in function in the payment of dividend is 75.49 which is in high level. This it can be conducted that dividend policy of the banks are not stable. There is no strategy of calculating growth in the dividends paid by banks. This shows that the dividend policy of the commercial banks is not uniform and consistent. There is fluctuation in the dividend payment even if the banks are making profit regularly the dividend payout ratio also does not show any stability and coordination with others variables.

There is large fluctuation in dividend in each year. There is not certain criterion for paying dividends. This study concludes that there is no long term vision regarding the dividend policy. All the selected commercial banks paid a dividend which's shows that dividend paying practice is established in Nepalese commercial bank is depending on current earnings. The banks are following earning based dividend policy. Only two variables earning and dividend is not sufficient to explain the change in dividend and market price of share meaning that it necessary to add other more variables in the regression model.

### **5.3 Recommendations**

On the basis of findings, of the study, following recommendation made for the further applications of dividend of the repercussion but there is not doubt have these measures to improve the existing conditions;

#### **I. Appropriate dividend policy should be made**

The sample Banks are not adopting a fixed or defined dividend policy they are adopting the dividend policy according to their requirement with the change of time and situation. But most of the investors prefer defined dividend policy; therefore, companies should clearly desire their dividend policy and communicate to investors. Clearly defined dividend policy help to determine specific policy i.e. stable dividend or constant payout or low regular plus extra. This helps to investors in deciding whether to buy or not the share of the particular company and to build good image, stock market.

#### **II. Fluctuations should be controlled**

Most of the banks had great fluctuation in DPS, EPS, DPR, P/E ratio and share price in terms of coefficient of variation. Such, fluctuation increase the risk position of investors and they are not motivated for the further investment. Therefore, company should try to stabilize these variables. Wide fluctuation in dividend payout ratio should be minimized. Consistency in dividend payout ratio over the period helps in gaining the payout ratio over the period helps in gaining the share holders confidence and then maximizing firm value.

#### **III. Motivation to the potential investors**

Unstable dividend payout schemes of the banks greatly affect the interest of investors. An investor would like to regain fixed earning from their investment so that they could manage their portfolio accordingly. Hence, a uniform dividend policy should be adopted by banks in order to stabilize the dividend which may attract or motivate new potential investors.

#### **IV. Research and Development management**

Their no research and development program exist in any of the banks so for in regard of dividend, earning and market price of the firm. For the smooth running and maximizing the wealth of the firm a proper and integrated team should be made who could penetrate into the prevailing market, research potential opportunities and provide necessary result and activities for the development of the firm.

#### **V. Meet the expectation of investors**

So far neither of the banks has been able to meet the expectation of the investors. Mainly investors are driven with a motive to get appropriate return form their investment portfolio. Due to uncertain dividend policy adopted by banks they are able to gain the faith of investors. So, a proper dividend distribution policy should be adopted by banks in order to retain prevailed investors and reduce fluctuation which surely increases the market price of the firms.

#### **VI. Long term vision should be made**

Companies should have long term vision regarding earning and dividend payment, also companies should define their vision clearly considering their future plans, expansion in business, future economy of the country etc various internal and external factors should be considered before taking decision.

Lastly, after making this study it is realized that dividend payment practices of the commercial banks are not regular in Nepal. Banks organizations establish to run for long periods in the small economy of Nepal there are already nearly three dozen banks and have neck to neck competition. So, even a small wrong decision can lead to bankruptcy. So it is necessity of legal provisions and rules for preserving certain policy regarding the dividend payment in the banking sectors for this purpose the concerned authority. i.e. Nepal Government, Nepal Rastra Bank, Security Board, Nepal Stock Exchange and also commercial institution should be can serious about the formulation and implication of rules regarding dividend payment this will help to regularized the dividend policy of the financial sector in Nepal.





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# APPENDICES

## APPENDIX - I

### EPS of Sample Banks

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LBL
2007/08	115.86	131.92	17.29	59.94	91.82	16.45
2008/09	113.44	109.99	22.89	54.68	99.99	20.70
2009/10	83.81	77.65	21.99	43.08	100.16	24.12
2010/11	70.67	69.51	19.82	44.51	83.18	23.25
2011/12	83.57	72.60	20.41	37.88	88.55	21.55

Source: Annual Report of Sample Banks

### DPS of Sample Banks

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LBL
2007/08	60.00	80.00	0.79	2.11	20.00	1.05
2008/09	35.00	50.00	0.79	7.37	30.00	0.26
2009/10	30.00	55.00	10.03	15.00	30.00	13.00
2010/11	30.00	50.00	12.79	16.75	10.00	10.79
2011/12	40.00	45.00	8.42	21.32	1.58	10.00

Source: Annual Report of Sample Banks

### MPS of Sample Banks

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LBL
2007/08	5,275	6,830	1,090	2,350	3,132	1,113
2008/09	4,899	6,010	1,000	1,825	2,455	1,062
2009/10	2,384	3,279	444	840	1,630	570
2010/11	1,252	1,800	270	570	1,094	340
2011/12	1,355	1,799	345	628	1,033	340

Source: Annual Report of Sample Banks

### P/E Ratio of Sample Banks

Banks Year	NABIL	SCBL	SBL	EBL	BOK
2007/08	45.53	51.77	63.04	39.21	34.11
2008/09	43.19	54.64	43.70	33.37	24.55
2009/10	28.45	42.23	20.19	19.50	16.27
2010/11	17.72	25.90	13.62	12.81	13.15
2011/12	16.21	24.78	16.91	16.58	11.67

Source: Annual Report of Sample Banks

$$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Dividend paid}}{\text{Total Earnings per Share}} \times 100$$

### DPR of Sample Banks

Banks Year	NABIL	SCBL	SBL	BOK	EBL	LBL
2007/08	51.79	60.64	4.57	3.52	21.78	6.38
2008/09	30.85	45.46	3.45	13.48	30.00	1.26
2009/10	35.80	70.83	45.61	34.82	29.95	53.90
2010/11	42.45	71.93	64.53	37.63	12.02	46.41
2011/12	47.86	61.98	41.25	56.28	1.78	46.40

Source: Annual Report of Sample Banks

$$\text{Dividend Yield (DY)} = \frac{\text{Dividend per Share (DPS)}}{\text{Market Price per Share (MPS)}} \times 100$$

### DY of Sample Banks

Banks Year	NABIL	SCBL	SBL	EBL	BOK	LBL
2007/08	1.14	1.17	0.07	0.09	0.64	0.09
2008/09	0.71	0.83	0.08	0.40	1.22	0.02
2009/10	1.26	1.68	2.26	1.79	1.84	2.28
2010/11	2.40	2.78	4.74	2.94	0.91	3.17
2011/12	2.95	2.50	2.44	3.39	0.15	2.94

Source: Annual Report of Sample Banks

## APPENDIX II

Year	EPS of NABIL (x)	$X - \bar{X}$	$(X - \bar{X})^2$
2007/08	115.86	22.39	501.31
2008/09	113.44	19.97	398.80
2009/10	83.81	(9.66)	93.32
2010/11	70.67	(22.80)	519.84
2011/12	83.57	(9.90)	98.01
	$\sum x = 467.35$		$\sum (X - \bar{X})^2 = 1611.28$

$$\bar{X} = \frac{\sum x}{N} = \frac{467.35}{5} = 93.47$$

$$S.D.(\sigma) = \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{1611.28}{5}} = 17.95$$

$$C.V. = \frac{S.D.}{x} \times 100 = \frac{17.95}{93.47} \times 100 = 19.21\%$$

Note: Mean ( $\bar{x}$ ), standard deviation (S.D.) and coefficient of variation (C.V) of EPS, DPS, MPS, DPR, DY an P/E ratio of all the Sample Bank are computed using the above model, Result of the computation are as follows.

### EPS

EPS	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	93.47	92.33	20.48	48.02	92.74	21.21
S.D.	17.95	24.51	1.93	8.07	6.59	2.67
C.V. (%)	19.21	26.55	9.44	16.82	7.11	12.59

**DPS**

DPS	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	39.00	56.00	6.56	12.51	18.32	7.02
S.D.	11.14	12.41	4.92	6.88	11.18	5.30
C.V. (%)	28.55	22.16	74.91	54.96	61.05	75.43

**DPR**

DPR	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	41.75	62.17	31.88	29.15	19.11	30.87
S.D.	7.65	9.51	24.07	18.67	10.90	22.31
C.V. (%)	18.33	15.29	75.49	64.05	57.03	72.28

**MPS**

MPS	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	3,033.00	3,943.60	560.80	1,242.60	1,868.80	685.00
S.D.	1,727.27	2,108.90	344.65	715.23	811.81	339.58
C.V. (%)	56.95	53.48	61.46	57.56	43.44	49.57

**DY**

DY	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	1.69	1.79	1.92	1.72	0.95	1.70
S.D.	0.84	0.75	1.74	1.32	0.57	1.37
C.V. (%)	49.70	41.72	90.70	76.51	59.33	80.67

**P/E Ratio**

P/E	NABIL	SCBL	SBL	BOK	EBL	LBL
Mean	30.22	39.86	31.49	24.29	19.95	34.60
S.D.	12.31	12.56	19.00	10.19	8.37	21.19
C.V. (%)	40.75	31.50	60.32	41.95	41.94	61.25

### APPENDIX III

#### Calculation of Correlation Coefficient MPS and DPS

#### NABIL

#### Calculated table of correlation coefficient between MPS and DPS

Year	MPS (x)	DPS (Y)	$x - \bar{x}$	$(X - \bar{x})^2$	$Y - \bar{Y}$	$(Y - \bar{Y})^2$	$(X - \bar{X})(Y - \bar{Y})$
2007/08	5,275.00	60.00	2,242.00	5,026,564.00	21.00	441.00	47,082.00
2008/09	4,899.00	35.00	1,866.00	3,481,956.00	(4.00)	16.00	(7,464.00)
2009/10	2,384.00	30.00	(649.00)	421,201.00	(9.00)	81.00	5,841.00
2010/11	1,252.00	30.00	(1,781.00)	3,171,961.00	(9.00)	81.00	16,029.00
2011/12	1,355.00	40.00	(1,678.00)	2,815,684.00	1.00	1.00	(1,678.00)
	$\sum X = 15165$	$\sum Y = 195$		$\sum (X - \bar{X})^2 = 14,917,366$		$\sum (Y - \bar{Y})^2 = 620$	$\sum (X - \bar{X})(Y - \bar{Y}) = 59810$

$$\bar{X} = \frac{\sum X}{N} = \frac{15165}{5} = 3033 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{195}{5} = 39$$

$$S.D(\sigma_x) = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{14,917,366}{5}} = 1,727.27$$



$$\text{S.D}(\sigma_y) = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{620}{5}} = 11.14$$

$$\begin{aligned} \text{COV}(X, Y) &= \frac{\sum (X - \bar{X})(Y - \bar{Y})}{N} & r &= \frac{\text{Cov}(X, Y)}{\sigma_x \times \sigma_y} \\ &= \frac{59810}{5} & &= \frac{11962}{1727.27 \times 11.14} \\ &= 11962 & &= 0.62 \end{aligned}$$

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

**NABIL**

**MPS on EPS**

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1 - (0.97)^2}{\sqrt{5}} = 0.02$$

$$6 \times \text{P.E} = 6 \times 0.02 = 0.09$$

**MPS on DPS**

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1 - (0.62)^2}{\sqrt{5}} = 0.18$$

$$6 \times \text{P.E.} = 6 \times 0.18 = 1.11$$

**MPS on DPR**

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1 - (0.08)^2}{\sqrt{5}} = 0.30$$

$$6 \times \text{P.E.} = 6 \times 0.30 = 1.80$$

**MPS on DY**

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1 - (-0.85)^2}{\sqrt{5}} = 0.08$$

$$6 \times \text{P.E.} = 6 \times 0.08 = 0.51$$

**MPS on P/E Ratio**

$$\text{Probable Error (P.E.)} = 0.6745 \times \frac{1 - (0.99)^2}{\sqrt{5}} = 0.01$$

$$6 \times \text{P.E.} = 6 \times 0.01 = 0.03$$

Note: Correlation coefficient (r) between MPS and DPS, MPS and EPS, MPS and DPR, MPS and DY, MPS and P/E, DPS and EPS, DPS & DPRS, DPS and DY, DPS and P/E ratio, EPS and DPR, EPS and DY and EPS and P/E ratio, also probable error (P.E.) between MPS with other financial indicators of all the sample banks are computed using above model. Results of the computation are as follows.

**Calculated table of correlation coefficient between MPS and DPS and MPS and other financial variables:**

**NABIL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.67	0.97	(0.02)	(0.75)	0.94
DPS	0.67	1.00	0.62	0.72	(0.19)	0.56
MPS	0.97	0.62	1.00	(0.08)	(0.85)	0.99
P.E.	0.02	0.18	-	0.30	0.08	0.01
6 x P.E.	0.09	1.11	-	1.80	0.51	0.03

**SCBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.80	0.97	(0.60)	(0.83)	0.85
DPS	0.80	1.00	0.72	(0.00)	(0.49)	0.57
MPS	0.97	0.72	1.00	(0.65)	(0.93)	0.95
P.E.	0.02	0.15	-	0.17	0.04	0.03
6 x P.E.	0.09	0.88	-	1.04	0.24	0.18

**SBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.12	(0.18)	0.07	0.00	(0.41)
DPS	0.12	1.00	(0.97)	1.00	0.96	(0.92)
MPS	(0.18)	(0.97)	1.00	(0.97)	(0.92)	0.97
P.E.	0.29	0.02	-	0.02	0.05	0.02
6 x P.E.	1.75	0.11	-	0.12	0.28	0.11

**EBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.87	0.46	0.83	0.67	0.34
DPS	0.87	1.00	0.59	1.00	0.84	0.49
MPS	0.46	0.59	1.00	0.61	0.11	0.99
P.E.	0.24	0.20	-	0.19	0.30	0.01
6 x P.E.	1.43	1.19	-	1.13	1.79	0.03

**BOK**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	(0.99)	0.96	(0.99)	(0.94)	0.92
DPS	(0.99)	1.00	(0.97)	1.00	0.97	(0.94)
MPS	0.96	(0.97)	1.00	(0.93)	(0.94)	0.99
P.E.	0.02	0.02	-	0.04	0.03	0.00
6 x P.E.	0.15	0.12	-	0.24	0.20	0.02

**LBL**

	EPS	DPS	MPS	DPR	DY	PE
EPS	1.00	0.82	(0.75)	0.79	0.74	(0.87)
DPS	0.82	1.00	(0.90)	1.00	0.92	(0.90)
MPS	(0.75)	(0.90)	1.00	(0.92)	(1.00)	0.98
P.E.	0.13	0.06	-	0.04	0.00	0.01
6 x P.E.	0.80	0.33	-	0.26	0.02	0.09

## APPENDIX IV

Simple linear Regression Analysis between MPS on EPS

Let MPS = Y

EPS = X

Simple linear Regression equation Y on X is given by:

Y = dependent variable

X = independent variable

a = Regression constant

b = Regression coefficient

$$\sum Y = na + b \sum X \text{ -----(ii)}$$

$$\sum XY = a \sum X + b \sum X^2 \text{ -----(iii)}$$

$r^2$  = Coefficient of determination

S.E.E = Standard Error of Estimation

S.b. = Standard error of regression coefficient

T = t-value

### Calculation of Simple Linear Regression between MPS on EPS of SCBL

Year	X	Y	XY	$X^2$	$Y^2$
2007/08	131.92	6,830.00	901,013.60	17,402.89	46,648,900.00
2008/09	109.99	6,010.00	661,039.90	12,097.80	36,120,100.00
2009/10	77.65	3,279.00	254,614.35	6,029.52	10,751,841.00
2010/11	69.51	1,800.00	125,118.00	4,831.64	3,240,000.00
2011/12	72.60	1,799.00	130,607.40	5,270.76	3,236,401.00
	$\sum X = 461.67$	$\sum Y = 19718$	$\sum XY = 2,072,393.25$	$\sum X^2 = 45,632.61$	$\sum Y^2 = 99,997,242.00$

Putting the calculated value on eq<sup>n</sup> (ii) and (iii)

$$19,718.00 = 5a + 461.67b \text{ ----- (iv)}$$

$$2,072,393.25 = 461.67a + 45,632.61b \text{ ----- (v)}$$

multiplying eq<sup>n</sup> 5 × eq<sup>n</sup> (v) 461.67 × eq<sup>n</sup> (iv)

$$\begin{array}{r} 9,103,209.06 = 2308.35a + 213,139.19b \\ - 10,361,966.25 = 2308.35a + 228,163.05b \\ \hline -1,258,757.19 = -15,023.86b \end{array}$$

$$b = \frac{1258757.19}{15023.86}$$

$$b = 83.78$$

Putting the value of b in eq<sup>n</sup> (ii)

$$\Sigma Y = na + b\Sigma X$$

$$19,718.00 = 5a + 461.67 \times 83.78$$

$$19,718.00 - 38,678.71 = 5a$$

$$a = -3792.50$$

$$\begin{aligned} \text{S.E.E.} &= \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma XY}{n-2}} \\ &= \sqrt{\frac{99997242 - (-3792.50) \times 19718 - 83.78 \times 2072393.25}{5-2}} \end{aligned}$$

$$\therefore \text{S.E.E.} = 617.69$$

$$\text{S.b.} = \frac{\text{S.E.E.}}{\sqrt{\Sigma (X - \bar{X})^2}}$$

$$= \frac{617.69}{\sqrt{3004.77}}$$

$$= 11.27$$

Note: The simple regression analysis between MPS on EPs, MPS on DPS, MPS of DPR, MPS of DY, DPS on EPs and S.E.E. and S.b. of all sample banks are calculate using the above model ; Results of the computation are as follows:

**Simple Regression analysis between MPS on EPS**

Bank	a	b	r2	S.E.E.	S.b
NABIL	(5,723.27)	93.68	0.95	508.69	12.67
SCBL	(3,792.50)	83.78	0.95	617.69	11.27
SBL	1,285.66	(32.02)	0.03	437.70	101.20
EBL	(3,345.87)	56.23	0.21	932.35	63.23
BOK	(2,831.85)	84.85	0.92	264.99	14.68
LBL	2,698.74	(94.92)	0.56	291.68	48.84

**Regression analysis between MPS on DPS**

Bank	a	b	r2	S.E.E.	S.b
NABIL	(729.33)	96.47	0.39	1,746.19	70.13
SCBL	236.82	66.19	0.52	2,310.54	83.27
SBL	(387.15)	154.93	0.94	788.56	71.72
EBL	(109.96)	108.03	0.34	373.99	14.96
BOK	(297.89)	123.14	0.94	1,352.27	87.96
LBL	(427.45)	158.47	0.82	788.12	66.56

**Regression analysis between MPS on DPR**

Bank	a	b	r2	S.E.E.	S.b
NABIL	3,813.31	(18.69)	0.01	2,222.24	129.87
SCBL	(654.05)	73.95	0.42	3,003.37	141.28
SBL	657.88	(0.88)	0.93	431.52	8.02
EBL	(91.74)	102.60	0.38	412.41	16.92
BOK	(3,948.37)	178.10	0.87	2,131.56	51.06
LBL	700.06	(0.49)	0.85	431.86	8.66

### Regression analysis between MPS of DY

Bank	a	b	r2	S.E.E.	S.b
NABIL	5,978.50	(1,741.16)	0.72	1,183.41	629.45
SCBL	(29.89)	2,217.41	0.87	3,582.32	2,142.72
SBL	(90.95)	375.86	0.85	737.11	189.54
EBL	(6.32)	1,966.32	0.01	967.60	764.84
BOK	(47.31)	748.83	0.89	1,400.95	475.39
LBL	(66.48)	441.31	0.99	730.62	237.87

### Regression analysis between DPS on EPS

Bank	a	b	r2	S.E.E.	S.b
NABIL	(0.01)	0.42	0.45	10.64	0.26
SCBL	18.73	0.40	0.64	9.67	0.18
SBL	0.54	0.29	0.01	6.31	1.46
EBL	(117.96)	1.47	0.75	7.20	0.49
BOK	52.98	(0.84)	0.98	1.27	0.07
LBL	(27.46)	1.63	0.67	3.91	0.66



## APPENDIX V

### Multiple Regression Analysis

The pooled average data of the observed banks are used the multiple regression and coefficient of determination analysis;

Multiple Regression Analysis of MPS on EPS and DPS

$$y = a + b_1X_1 + b_2X_2$$

Where,

Y = market price per share (Dependent variables)

X<sub>1</sub> = Earning per share (1<sup>st</sup>Independent variables)

X<sub>2</sub> = Dividend per share (2<sup>nd</sup> Independent variables)

a<sub>1</sub> = Regression Constant

b<sub>1</sub>&b<sub>2</sub> = Coefficient of Net Regression (i.e. regression constant)

#### Calculation of Multiple (Pooled Average Analysis) Regression of MPS on EPS and DPS

Y	X <sub>1</sub>	X <sub>2</sub>	X <sub>1</sub> Y	X <sub>2</sub> Y	X <sub>1</sub> X <sub>2</sub>	X <sub>1</sub> <sup>2</sup>	X <sub>2</sub> <sup>2</sup>	Y <sup>2</sup>
5,275.00	115.86	60.00	611,161.50	316,500.00	6,951.60	13,423.54	3,600.00	27,825,625.00
4,899.00	113.44	35.00	555,742.56	171,465.00	3,970.40	12,868.63	1,225.00	24,000,201.00
2,384.00	83.81	30.00	199,803.04	71,520.00	2,514.30	7,024.12	900.00	5,683,456.00
1,252.00	70.67	30.00	88,478.84	37,560.00	2,120.10	4,994.25	900.00	1,567,504.00
1,355.00	83.57	40.00	113,237.35	54,200.00	3,342.80	6,983.94	1,600.00	1,836,025.00
ΣY = 15165	ΣX <sub>1</sub> = 467.35	ΣX <sub>2</sub> = 195	Σ X <sub>1</sub> Y= 1568423.29	ΣX <sub>2</sub> Y= 651245	ΣX <sub>1</sub> X <sub>2</sub> = 18899.20	ΣX <sub>1</sub> <sup>2</sup> = 45294.48	ΣX <sub>2</sub> <sup>2</sup> = 8225	ΣY <sup>2</sup> = 60912811

$$\Sigma Y = na + b_1 \Sigma X_1 + b_2 \Sigma X_2 \text{ ----- (i)}$$

$$\Sigma X_1 Y = a \Sigma X_1 + b_1 \Sigma X_1^2 + b_2 \Sigma X_1 X_2 \text{ ----- (ii)}$$

$$\Sigma X_2 Y = a \Sigma X_2 + b_1 \Sigma X_1 X_2 + b_2 \Sigma X_2^2 \text{ ----- (iii)}$$

Putting above calculated value in eq<sup>n</sup> (i), (ii) and (iii)

$$15165 = 5a + 467.35 b_1 + 195b_2$$

$$1568423.29 = 467.35 a + 45294.48b_1 + 18899.20 b_2$$

$$651245 = 195 a + 18899.20 b_1 + 8225 b_2$$

Applying  $[467.35 \times \text{eqn (i)} - 5 \times \text{eqn (ii)}]$

$$7087362.75 = 2336.75a + 218416.02 b_1 + 91133.25b_2$$

$$\underline{-7842116.45 = -2336.75a + 226472.42 b_1 + 94496 b_2}$$

$$-754753.70 = -8056.39 b_1 - 3362.75 b_2 \text{ ----- (iv)}$$

Again applying  $(195 \times \text{eqn (ii)} - 467.35 \times \text{eqn (iii)})$

$$305842541.55 = 91133.25 a + 8832424.20 b_1 + 3685344 b_2$$

$$\underline{-304359350.75 = -91133.25 a + 8832541.12 b_1 + 3843953.75 b_2}$$

$$1483190.80 = -116.92 b_1 - 158609.75 b_2 \text{ ----- (v)}$$

Applying  $116.92 \times \text{eqn (iv)} - 8056.39 \times \text{eqn (v)}$

$$-88242406.21 = -941917.22 b_1 - 393157.60 b_2$$

$$\underline{-11949167978.79 = 941917.22 b_1 + 1277822479.63 b_2}$$

$$-12037410385 = 1277429322.03 b_2$$

$$b_2 = \frac{-12037410385}{1277429322.03}$$

$$= -9.42$$

Putting the value of  $b_2$  in eqn (v)

$$1483190.80 = -116.92 b_1 - 158609.75 \times -9.42$$

$$b_1 = \frac{1483190.80 - 1494103.85}{-116.92}$$

$$= 97.62$$

Again putting the value of  $b_1$  and  $b_2$  in eqn (i)

$$15165 = 5a + 467.35 \times 97.62 + 195 \times -9.42$$

$$a = \frac{15165 - 45622.71 + 1836.90}{5}$$

$$= -5723.76$$

Coefficient of multiple determination

$$(R_{y.12})^2 = \frac{a \sum Y + b_1 \sum X_1 Y_1 + b_2 \sum X_2 Y - n(\bar{Y})^2}{\sum Y^2 - n(\bar{Y})^2}$$

$$= \frac{-5723.76 \times 15165 + 97.62 \times 18899.20 - 9.42 \times 651245 - 5(3033)^2}{60912811 - 5 \times (3033)^2}$$

$$= 0.95$$

S.E.E ( $S_{y.12}$ )

$$= \sqrt{\frac{\sum Y^2 - a \sum Y - b_1 \sum X_1 Y - b_2 \sum X_2 Y}{n - 3}}$$

$$= \sqrt{\frac{60912811 - (-5723.76 \times 15165) - 97.62 \times 1568423.39 - (-9.42 \times 651245)}{5 - 3}}$$

$$= 610.57$$

Note: Multiple regression analysis (i.e. Bank pooled average)  $a$ ,  $b_1$ ,  $b_2$  ( $R_{y.12}$ )<sup>2</sup>,  $S_{y.12}$  of all sample bank related are computed using the above model, Result of the computations are as follows;

**Calculated multiple regression and coefficient of determination analysis of  
MPS and EPs and DPS:**

Regression Model	$a_1$	$b_1$	$b_2$	$S_{y.12}$	$(R_{y.12})^2$
$Y = a + b_1 X_1 + b_2 X_2$	(5,723.76)	97.62	(9.42)	610.57	0.95

**Calculated multiple regression and coefficient of determination analysis of  
MPS on EPS and DPR:**

Regression Model	$a_1$	$b_1$	$b_2$	$S_{y.12}$	$(R_{y.12})^2$
$Y = a + b_1 X_1 + b_2 X_2$	(5,091.24)	93.57	(14.90)	596.12	0.95

## APPENDIX VI

Test of Hypothesis

(F-test) F or EPS of All Sample Banks

Step I : Null Hypothesis (Ho)

There is not significance difference among mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LBL

Step II : Alternative Hypothesis (H<sub>1</sub>)

There is significance difference among mean value of EPS of NABIL, SCBL, SBL, EBL, BOK and LBL.

Step III : Test Statistic Under Ho;

$$F_{\text{cal}} = \frac{\text{MSB}}{\text{MSE}}$$

Where,

MSB = mean sum of square between sample sub group (i.e. six companies)

MSE = mean sum of square due to error.

### EPS

Banks Year	NABIL (A)	SCBL (B)	SBL (C)	BOK (D)	EBL (E)	LBL (F)
2006/07	115.86	131.92	17.29	59.94	91.82	16.45
2007/08	113.44	109.99	22.89	54.68	99.99	20.70
2008/09	83.81	77.65	21.99	43.08	100.16	24.12
2009/10	70.67	69.51	19.82	44.51	83.18	23.25
2010/11	83.57	72.60	20.41	37.88	88.55	21.55

The given data can be coded by subtracting 99.99

$X_A$	$X_B$	$X_C$	$X_C$	$X_E$	$X_F$	$X_A^2$	$X_B^2$	$X_C^2$	$X_D^2$	$X_E^2$	$X_F^2$
15.87	31.93	-82.70	-40.05	-8.17	-83.54	251.86	1,019.52	6,839.29	1,604.00	66.75	6978.93
13.45	10.00	-77.10	-45.31	0.00	-79.29	180.90	100.00	5,944.41	2,053.00	0.00	6286.90
-16.18	-22.34	-78.00	-56.91	0.17	-75.87	261.79	499.08	6,084.00	3,238.75	0.03	5756.26
-29.32	-30.48	-80.17	-55.48	-16.81	-76.74	859.66	929.03	6,427.23	3,078.03	282.58	5889.03
-16.42	-27.39	-79.58	-62.11	-11.44	-78.44	269.62	750.21	6332.98	3857.65	130.87	6152.83
$\Sigma X_A =$ -32.60	$\Sigma X_B =$ -38.28	$\Sigma X_C =$ -397.55	$\Sigma X_D =$ -259.86	$\Sigma X_E =$ -36.25	$\Sigma X_F =$ -393.88	$\Sigma X_A^2 =$ 1823.83	$\Sigma X_B^2 =$ 3297.84	$\Sigma X_C^2 =$ 31627.91	$\Sigma X_D^2 =$ 13831.43	$\Sigma X_E^2 =$ 480.23	$\Sigma X_F^2 =$ 31063.95

Now, Grand Total (T) = Sum of all observation  
 $= \Sigma X_A + \Sigma X_B + \Sigma X_C + \Sigma X_D + \Sigma X_E + \Sigma X_F$   
 $= -32.60 - 38.28 - 397.55 - 259.86 - 36.25 - 393.88$   
 $= -1158.42$

$$\begin{aligned} \text{Correction Factor (C.F)} &= \frac{T^2}{N} \\ &= \frac{(-1158.42)^2}{30} \\ &= 44731.23 \end{aligned}$$

Total sum of square (TSS)

$$= \sum X_A^2 + \sum X_B^2 + \sum X_C^2 + \sum X_D^2 + \sum X_E^2 + \sum X_F^2 - C.F.$$

$$\begin{aligned} &= 1823.83 + 3297.84 + 31627.91 + 13831.43 + 480.23 + 31063.95 - 44731.23 \\ &= 37393.96 \end{aligned}$$

Sum of square between sample sub groups

$$\begin{aligned} \text{(S.S.B)} &= \frac{(\sum X_A)^2}{n_A} + \frac{(\sum X_B)^2}{n_B} + \frac{(\sum X_C)^2}{n_C} + \frac{(\sum X_D)^2}{n_D} + \frac{(\sum X_E)^2}{n_E} + \frac{(\sum X_F)^2}{n_F} - C.F \\ &= \frac{(-32.60)^2}{5} + \frac{(-38.28)^2}{5} + \frac{(-397.55)^2}{5} + \frac{(-259.86)^2}{5} + \frac{(-36.25)^2}{5} + \frac{(-393.88)^2}{5} - 44731.23 \\ &= 32180.14 \end{aligned}$$

Sum of square due to error

$$\begin{aligned} \text{S.E.E.} &= \text{TSS} - \text{SSB} \\ &= 37393.96 - 32180.14 \\ &= 5213.82 \end{aligned}$$

**One way ANOVA Table**

Source of Variation	Sum of Square (S.S)	(d.f)	Mean Sum of Square (MSS)
i) Between	SSB = 32180.14	K-1=6-1=5	$\begin{aligned} \text{MSB} &= \frac{\text{SSB}}{K-1} \\ &= \frac{32180.14}{5} \\ &= 6436.03 \end{aligned}$
ii) Error	SEE = 5213.82	$\begin{aligned} \text{N-K} &= 30-6=24 \\ \text{n-1} &= 29 \end{aligned}$	$\begin{aligned} \text{MSE} &= \frac{\text{SEE}}{N-K} \\ &= \frac{5213.82}{24} \\ &= 217.24 \end{aligned}$

K = no. of sample sub group (i.e. 6 bank)

$$\begin{aligned}
 F_{\text{cal}} &= \frac{\text{MSB}}{\text{MSE}} \\
 &= \frac{6436.03}{217.24} \\
 &= 29.63
 \end{aligned}$$

Step IV : level of significance ( $\alpha$ ) = 0.05

Step V : Degree of freedom (d.f) = (k-1, n-k)  
= (5, 24)

Step VI : Critical value : The  $F_{\text{tab}}$  at 5% level significance for (5,24) degree (of freedom is 2.62)

Step VII : Decision : Since  $F_{\text{cal}} > F_{\text{tab}}$  so null hypothesis is rejected.

Note : Test of Hypothesis (F-test) of EPS, DPS, MPS, DPR, DY and P/E ratio of all sample bank are computed using the above model, Results of computation are as follows:

#### Result of Hypothesis Regarding EPS

Particulars	EPS
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	29.63
Prob. value of F-Statistic	2.62

#### Result of Hypothesis Regarding DPS

Particulars	DPS
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	19.12
Prob. value of F-Statistic	2.62

### Result of Hypothesis Regarding MPS

Particulars	MPS
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	4.88
Prob. value of F-Statistic	2.62

### Result of Hypothesis Regarding DPR

Particulars	DPR
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	3.10
Prob. value of F-Statistic	2.62

### Result of Hypothesis Regarding DY

Particulars	
Numberator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	0.34
Prob. value of F-Statistic	2.62



### Result of Hypothesis Regarding P/E Ratio

Particulars	P/E ratio
Numerator Degree of Freedom	5
Denominator Degree of freedom	24
Significance level	5%
Calculated value of F-statistic	0.94
Prob. value of F-Statistic	2.62