

**IMPACT OF DIVIDEND ON EQUITY
SHARE PRICING IN NEPAL**

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BY

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Recommendation

This is certify that the Thesis

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Entitled

“Impact of Dividend on Equity Share Pricing in Nepal”

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DECLARATION

I here by declare the thesis entitled “**IMPACT OF DIVIDEND ON EQUITY SHARE PRICING IN NEPAL**” submitted to the office of the Dean, Faculty of Management, Tribhuvan University is my original work, which is prepared as partial fulfillment of the requirement for Master’s Degree of Business Studies (MBS) under the supervision of Mr. Rajendra Lamsal, Lecture of Lumbini Banijya Campus.

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ABBREVIATIONS

| | |
|------|-------------------------------|
| % | : Percentage |
| & | : And |
| A.D | : Anno Domini |
| A/C | : Account |
| B.S | : Bikram Sambat |
| BVPS | : Book Value Per Share |
| C.V | : Correlation of Variation |
| EBL | : Everest Bank Limited |
| FY | : Fiscal Year |
| GON | : Government of Nepal |
| HBL | : Himalayan Bank Limited |
| i.e. | : That is |
| Ltd. | : Limited |
| MBS | : Master of Business Studies |
| NGO | : Non Government Organization |
| NO. | : Number |
| NPAT | : Net Profit After Tax |
| NRB | : Nepal Rastra Bank |
| P/ER | : Price-Earning Ratio |
| Pvt. | : Private |
| T.U | : Tribhuvan University |
| TPS | : Tax Per Share |
| USA | : United States of America |
| Vol. | : Volume |

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Investors in developing countries like Nepal mostly look at the profitability of the firm while purchasing equity shares from the secondary market. Since dividend paid to the shareholders is one of the best indicators of profitability, it is generally believed that dividend plays a crucial role in determining market price of the corporate share. Dividend is defined as that portion of the net earnings of the firm, which is distributed to the stockholders either in the form of cash or stock as per its dividend policy. A firm generally pays stock dividend if it plans to increase the capital so as to expand the business. The objective of dividend policy should be to maximize the shareholders return so that value of their investment is maximized. Dividend decision is one of the major decisions taken by the firm. The amount of dividend declared by a firm shows the actual position of the earnings of the firm. The firm issues equity shares to raise ownership capital and the investors buy them, with the expectation to receive a share of profit. The value of the firm is said to be high when the market price of the company's common stock is higher.

The wealth maximization principle also implies that fundamental objective of the firm should be to maximize the market price of the company's share. Firms that perform better than others have higher stock prices and can raise additional funds (both debt and equity) in more favorable terms. Therefore, it is important to identify the factors that determine the market price of equity shares of any organization. Financial institutions including the commercial banks, in Nepal are the institutions that mobilize resources in the society. Their survival and growth is very important for the growth of the nation. Thus, the study of the historical growth of capital market and the equity price behavior of commercial banks in Nepal is much relevant in the present context. The history of capital market in Nepal is not very long. Biratnagar Jute Mills Ltd. was the first company to issue share to general public in 1937. Institutional development of securities market in Nepal started when Securities Exchange Centre (SEC) was established under the Companies Act in 1976. It was established with the joint capital contribution of Nepal Rastra Bank and Nepal Industrial Development Corporation. The objective of the establishment of Securities exchange Centre

was to facilitate and promote the growth of capital market in Nepal. It was converted into Nepal Stock Exchange (NEPSE) in 1993, with the establishment of Securities Board. It is a non-profit making organization operating under Securities Exchange Act 1983. During 90's along with the economic liberalization in Nepal many joint venture banks established in private sector, which subscribed shares widely to the general public. Commercial banking appeared as the most profitable business and therefore in the beginning the price of shares of commercial banks continuously went up. However, the stock market had been much volatile in Nepal during the last decade because of internal conflict, political instability, insider trading and various other reasons.

(Lakonishok and Lev, 1987) states that the clue to stock dividend distributions may lie in their perceived substitution for relatively low cash dividends. (Litzenberger and Ramaswamy, 1982) concluded that The controversy centers on whether or not the positive association between common stock return and dividend yields reported in a number of empirical studies can be attributed entirely to information effects. It is said that when the firms need to retain a high percentage of earning, they issue stock dividends so that the shareholders of the firms are content. Managers strongly agree that stock dividends have a positive psychological impact on investors receiving them . (McNichols and Dravid, 1990) report that the Stock split is another aspect of dividend policy practitioners have long contended that the purpose of stock split is to move a firm's share price into an "optimal trading range" . Specially, investors of small means are presumably penalized by high stock prices that deny them the economics of buying stock in round lots. An alternative form of dividend is share repurchase. If a firm has some surplus cash (or if it can borrow), it may choose to buss back some of its own shares. In the developed capital market corporations are allowed to buy back share better utilization of unused cash.

The issue of how much a company should pay its stockholders as dividends is one that has concerned managers for a long time. It has been often been pointed out that a company that raises its dividend often experiences an increase in its stock price and that a company that lowers its dividend has a falling stock price. This seems to suggest that dividends to matter in that they affect stock price. But this causal relationship has been refuted by several researchers on the grounds that dividends per share do not affect stock prices; rather, it is the informational content of dividends that affect stock prices . They provide a rationale for value maximizing firms paying positive dividends when the risk premiums per unit of dividend yield is positive in equilibrium. An increase in dividends paid out can represent

an inimitable and unambiguous signal to the market place that a firm's prospects have improved. If this is an accurate picture of the way in which firms operate, then I follow that changes in dividend payments supply the market with information regarding management's assessment of the level of the firm's long run cash flows.

By issuing dividends, management is forced to go to the capital market for additional financing. Higher dividends can directly benefit shareholders because they reduce the free resources which managers can use sub optimally. Easterbrook (1984) believe that management decides to pay dividends in order to reduce agency costs. Each time it attempts to raise fresh capital, its operations are intensely scrutinized by investment bankers, accountants, and other market professionals because these parties have a comparative advantages over the bondholders in monitoring the firm's activities, dividend payments accompanied by subsequent new financing may lower monitoring costs and thereby increase firm value .

There are reasons for the efficacy of dividends as signals. Dividend announcements are backed by hard, cold cash. The firm must generate this cash internally or convince the capital markets to supply it. Alternative communications may lack the credibility that comes from "saying it with cash." Investors may feel that financial statements have been skillfully massaged by the financial staff. (Asquith and David, 1986) In addition, says that dividend decisions tend to be future oriented as opposed to accounting statements which document past performance. Besides credibility, dividends also have the advantages of simplicity and visibility. Many others announcements are, at the same time, complex and detailed in focus. The empirical evidence confirms that alternatives are not perfect substitutes for dividends. Dividends serve as a simple, comprehensive signal of management's interpretation of the firm's recent performance and its future prospects. The relationship between dividend and share price is not yet clear and it is still a controversial issue in the literature of finance. Theoretically speaking, continuous cross section techniques are the most appealing. The separate effects on price of all omitted variables should be aggregated to take into account the firm effect. The firm effects cannot be measured directly, as they are both additive and constant over time. Such firm effects include those related to investor assessment of both profit prospects and risk, some of which could alternatively be measured directly.

The improved corporate dividend practice is thus an essential means to solve the problems of asymmetric information between management of newly established Nepalese companies and

Nepalese investors who have poured their funds there in. Viewed in this perspective, the study devoted to effects of dividend of common stock price in Nepal may help to develop capital market in one way or another.

1.2 Statement of the Problem

The stock market reveals the situation of country's economy. When stock market is in the boom, the financial market of the country is good and in the case of decline of stock market, financial market of the country goes bad. In Nepalese economy, share price is highly determined by the market conditions. Without any significant economic ups and downs in the economy equity market sometimes becomes much volatile. With the result investors in bank equity suffer higher economic loss. Therefore, it is much important to identify the causes responsible for the fluctuations of equity share prices in Nepal and suggest measures, which makes the share market stable. In this light, the relationship between dividend paid and the market price of equity shares needs to be analyzed with more focus. There are several studies that present the brief examination of the relationship between the dividend paid and the market price of the equity shares. The earlier studies lack a comprehensive study of the behavior of market price as a result of changes in dividends. There is a need to conduct a survey of financial exclusives in order to find out more qualitative facts on dividends which cannot be determined through the use of secondary data. To sum up, this study deals with the following issue.

- a) It is possible to increase the value of stock by changing dividend policy or payout?
- b) Do the companies paying larger dividends have a good financial position?
- c) What is the relationship between dividends and stock price?
- d) Is there any effect of company's announcement of earnings on market price of a share?
- e) Are the companies with higher dividend yield have improved financial ratios?
- f) Is there any consistency in EPS, DPS, MPS and DPR?
- g) What kind of dividend policy should be followed by Nepalese enterprises?

1.3 Objectives of the Study

The main objective of the study is to examine the effect of dividend on pricing system of the equity shares. Following are the major objectives of the study:

- a) To explore the impact of dividend per share (DPS) in equity share price behavior. b) To examine the relationship of Market price per share with other financial indicators such as Earnings Per Share and Dividend Payout Ratio. c) To conduct an empirical analysis in order to explore the impact of dividend on equity share pricing in Nepal.

1.4 Limitation of the Study

The study relies on various financial and statistical tools to obtain a impact of dividend on equity share pricing. However in the process of deriving reliable findings, the study is not free from limitations. The limitations of the study are as follows.

- a) The study covers only the effect of dividend on equity share behavior of selected financial institutions only i.e. five commercial banks.
- b) The result of this study will be limited to the relationship between the dividend and the equity stock pricing behavior of commercial banks because the relevant data of the selected companies are only analyzed in this study.
- c) This study assumes that the individuals who respond to this survey are truthful.
- d) Since the data are mainly collected from the secondary source, the consistency of the findings is reliable upon the reliability of the secondary data and information.
- e) This study covers the data of only five years i.e. 2006-07 to 2011-12.

1.5 Organization of the Study

The study has been organized into five chapters, each devoted to some aspects of the study of the impact of dividend on equity share pricing in Nepal. The titles of each of the chapters are as follows:

- Chapter One : INTRODUCTION
- Chapter Two : REVIEW OF LITERATURE
- Chapter Three : RESEARCH METHODOLOGY
- Chapter Four : PRESENTATION AND ANALYSIS OF DATA

Chapter Five : SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The first chapter deals with subject matter of the study consisting of background of banking, focus of the study, statement of the problems, objectives of the study, significance of the study, hypothesis, the limitations of the study and the organization of the study.

The second chapter contains review of previous researches. This chapter reviews the literature related with the research topic, with more focus on the impact of dividend on equity share pricing. In this regard, an insight would be put on the theories, then on the researches conducted outside and inside the country. Furthermore, the theoretical underpinning of the concepts used during the analysis and the theories behind the share pricing would also be explained. While preparing this thesis, the researcher reviewed various magazines, journals, books, reports, etc and collected materials from different sources. The review of literature has been divided into three categories namely conceptual framework, theories related to the topic and review of articles, books and masters' level thesis.

The third chapter researches the methodology, which is used to evaluate the dividend payment policy of these banks. It consists of research design, sample and populations, sources of data, methods of data analysis and financial tools.

The fourth chapter would contain presentation and analysis of Secondary as well as primary data. This chapter would be divided into two sections. The first section would attempt to analyze and evaluate data with the help of analytical tools and interpretation the results obtained. The second part would present the response of the individual share investors on the pricing behavior, their understanding of the market and other relevant aspects contain the presentation of primary data.

The fifth chapter is concerned with the summary of the study along with various suggestions and recommendations for improving future performance of the banks and conclusions drawn from the study.

Finally an extensive bibliography and appendixes are presented at the end of study.

CHAPTER - II

REVIEW OF LITERATURE

This chapter reviews the literature related with the research topic, with more focus on the impact of dividend on equity share pricing. In this regard, an insight would be put on the theories, then on the researches conducted outside and inside the country. Furthermore, the theoretical underpinning of the concepts used during the analysis and the theories behind the share pricing would also be explained. While preparing this thesis, the researcher reviewed various magazines, journals, books, reports, etc and collected materials from different sources. The review of literature has been divided into three categories namely conceptual framework, theories related to the topic and review of articles, books and masters' level thesis.

2.1 Conceptual Framework

In this section, some of the basic literatures on dividend, dividend policy and stock price behavior are reviewed. This section would broadly discuss the concepts related to the research topic. It includes following.

- Dividend
- Dividend Policy
- Equity Share

2.1.1 Dividend

(Weston, 1987) After fulfilling the tax obligations, some part of the net earning of the firm is divided into retained earning for further investment and some part is distributed among its shareholders. Dividend is that portion of the firm's net earnings that is distributed to the shareholders. Dividend is distributed either in form of cash or in form of share. When the firm is heading towards expansion, it keeps the earning as retained earnings for expansion as cash is needed for the expansion of every business. When business has no more plan of expansion, it distributes its cash as a dividend to its shareholders.

A. Major forms of Dividend

Cash Dividend

(Weston, 1987) When the company pays the dividend in form of cash, this is called cash dividend. This is the most common form of dividend and most preferred by the shareholders. 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 as per the amount of the cash dividend distributed.

Stock Dividend

(Weston, 1987) Sometimes, when there is good investment opportunity for the company and the whole portion of the profit is needed for reinvestment, the company prefers to retain the whole portion of profit. But, in order to satisfy the shareholders the company should also pay the dividend. In such case, the company decides to pay the dividend in the form of stock. Such dividend is called stock dividend. When a firm pays stock dividend, the net worth of the share and total assets remains unaffected.

Interim Dividend

(Weston, 1987) Generally dividend is declared in the last of financial year. This is called regular dividend. Many times directors can declare the dividend before the end of the financial year. This is called interim dividend.

Bond Dividend

(Weston, 1987) Companies can give dividends in the form of bonds. These bonds can be long term bonds. These are given when the company is unable to take the burden of interest of loans.

Special Dividend

(Weston, 1987) When directors of the company do not want to change the dividend separately and when the companies have good cash and reserves. This dividend is given with the regular dividend but separately.

B. Theories of Dividend

i) Dividends as Residual

As long as the firm has investment projects with returns exceeding those that are required, it will use retained earnings and the amount of senior securities that increase in equity base will support, to finance these projects. When we treat dividend policy as strictly a financing decision, the payment of cash dividends is a passive residual. The amount of dividend payout will fluctuate from period to period in keeping with fluctuations in the amount of acceptable investment opportunities available to the firm. If these opportunities abound, the percentage of dividend payout is likely to be zero.

On the other hand, if the firm is unable to find profitable investment opportunities, dividend payout will be 100 percent. For situations between these two extremes, the payout will be a fraction between zero and one. The treatment of dividend policy as a passive residual determined solely by the availability of acceptable investment proposals implies that dividends are irrelevant; the investor is indifferent between dividends and retention by the firm. A residual theory of dividend policy does not necessarily mean that dividends need fluctuate from period to period in keeping with fluctuations in investment opportunities. A firm may smooth out actual payments by saving some funds in surplus years, in anticipation of deficit years. If forecasting is relatively accurate, the firm can establish its dividend payment at a level at which the cumulative distribution over time corresponds to cumulative residual funds over the same period. (Van Horne, 1997).

ii) 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 upkeep its image and retain the shareholder's positive attitude towards the company's stock.

2.1.2 Dividend Policy

Dividend policy is one of the major decisions of the firm. The dividend payout ratio of the firm depends upon the way earnings are measured.

Factors Influencing Dividend Policy

Company's firm's dividend policy is affected by various factors. Some of them are unique to that company, and some of the more general considerations are given below:

i) Legal Rule

Certain rules may limit the amount of dividends a firm may pay. These legal constraints fall into two categories. First, statutory restriction may prevent a company from paying dividend. While specify limitations vary by state, generally a corporation may not pay a dividend.

- It the firms liabilities exceed its assets.
- If the amount of the dividend exceeds the accumulated profits or retained earnings.
- If the dividend is being paid from capital invested in the firm. The second type of legal restrictions is unique to each firm and results from restrictions in debt and preferred stock contracts.

ii) Liquidity Portion

The cash or liquidity portion of the firm influences its ability to pay dividends. 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 earnings to pay dividend.

iii) Need to Repay Debt

The need to repay debt also influences the availability of cash flow to pay dividend.

iv) Rate of Asset Expansion

Rate of asset expansion creates a need to retain funds rather than to pay dividends.

v) Profit Rate

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

vi) Control

It is very important for every firm to maintain the control rate. These owners would prefer the use of debt and retained profits to finance new investments rather than issue new stock. As a result dividend payout will be reduced.

2.1.3 Equity Share

Equity shares are normally called common stocks. They are issued by the firm to raise ownership capital and the investors buy them to with the expectation that they receive a share of profit periodically. The holders of common stocks, called shareholders or stockholders are the legal owners of a company. The equity shares are the permanent and vital source of capital residual claim, in the sense that creditors and preferred stock holders must be paid as scheduled before common stockholders can receive any payments.

Features of Equity Share

Claim on Income: The common stockholders have claim to residual income, which is earnings available for ordinary shareholders. After paying expenses, interest charges, taxes and preference dividends and retained earnings, Dividends are immediate cash flow to shareholders, whereas retained earnings are reinvested in the business. A company is not under any obligation to distribute dividends out the available earnings.

Claim to Assets: The equity shareholders have a residual claim on the companies' asset. Out of the realized value of assets, first the claims to debt-holder and then preference shareholders are satisfied, and the remaining balance, if any, is paid to the common stockholders.

Right to Control: The ordinary shareholders have the legal power to elect directors to the board, if the board fails to protect their interest, they can replace the directors. They are able to participate in the management of the company through their voting right and right to maintain proportionate ownership.

Voting Right: Common stockholders have the right to vote on stockholder matter, such as selection of board of directors, sale of fixed assets, merger of the company, amendment of corporate charter etc.

Pre-emptive Right: It does something before others. It is also a right of the stockholders. It gives holders of common stock the firstly option to purchase additional issues of common stock. The purpose of pre-emptive right is to protect the power of control of present stockholders.

Limited Liability: The common stock holders are the true owner of the company, but their liability is limited to the amount of their investment in shares. If a stockholder has already fully paid the issue price of shares purchased, he has nothing more to contribute in the event of financial distress or liquidation. The limited liability feature of share encourages unwillingly investors to invest their funds in the company which helps company to raise funds.

2.2 Review of Empirical Works

In order to make this study more comprehensive some articles, researches and studies related to Impact of dividend on equity share pricing are reviewed here under.

(Pradhan, 1986) studied on *Stock Market Behavior in a Small Capital Market: A case of Nepal* was based on the data collected for 17 enterprises from 1986 through 1990. The objectives of this study were to assess the stock market behavior in Nepal and to examine the relationship of market equity, market value to book value, price earnings, and dividends with liquidity, profitability, leverage, assets, turnover, and interest coverage.

Some findings of his study were as follows:

- a) Higher the earnings on stocks, larger the ratio of dividends per share to market price per share.
- b) Dividend per share and market per share are positively correlated.
- c) Positive relationship between the ratio of dividend per share to market price per share and interest coverage.
- d) Liquidity and leverage ratios are more variable for the stock paying lower dividends.
- e) Earnings assets turnover and interest coverage are more variable for the stock paying higher dividends

(Ojha, 2000) did a study on *“Financial Performance and Common Stock Pricing”*. The main objectives of his research were to study and examine the difference of financial

performance and stock prices, to examine the relationship of dividends and stock price and to explore the signaling effects in stock price.

Nepalese stock market is in infancy stage. In general it is very new and just started to develop. Dominance of banking sector is prevalent in the market due to other industries including finance companies, insurance and manufacturing is not encouraging. Corporate firm with long history have relatively stable profitability parameters that the firm established after the economic liberalization of 1990. Older firms have been issuing bonus share more times than the new one. Dividend per share is relatively more stable than the dividend payout ratio. That's why payout ratio and dividend yields have been highly fluctuating. Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market. There is significant positive correlation between the dividends paid and stock prices of banking and manufacturing industries. All other have not a perfect correlation between the net worth per share and common stock price.

(Timilsina, 2001) conducted a study on *Capital Market Development and Stock Price Behaviour in Nepal*. He published an article with a heading "Capital Market Development and Stock Price Behaviour in Nepal" in the Economic Review published by Nepal Rastra Bank in April 2001. The following is the main part of the study.

Capitalization of Dividends

Investors are interested in return; therefore, the price they will be prepared to pay for the share will depend upon the size of dividends. According to the dividend valuation model future streams of cash dividends are to be valued and discounted by the cost of equity (ke). Hence the value of an equity share is the present value of all future streams of cash dividends an investor expects to receive. Since the company is a going concern and has an indefinite life, an investor has to assume a fixed period within which he wants to hold the share. Thus, the model is:

$$P_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+K_e)^t}$$

Where,

Po = Present market value of an equity

Dt = Expected future dividend at each future date t

Ke = The required rate of return

The required rate of return for equity which discounts the future dividend to a present value per share. This model considers dividend per share, not total dividends. The amount of dividend is dependent on company's pay out policy. The declared dividend may be only a small proportion of profits of the company available to equity shareholders. The part of profits retained in the company represents deferred income to the shareholders. This profit is available to the company for the financing of assets to produce more profits and dividends in future. On the other hand, dividends are sometimes declared in excess of earnings. Therefore, the argument raised against this model is that the method of valuing shares is misleading if the dividend income is not consistent. Since the dividend declared by the company is normally much less than the rate of earning, earning yield is frequently regarded as a better measure of valuing the share.

2.2.1 Zero Growth

If all future dividends are expected to remain constant i.e. there is no growth in the rate of dividend, the model becomes:

$$P_o = \frac{D_t}{(1+K_e)^{t-1}} = \frac{D}{K_e}$$

Here, the market value of share is the capitalized value of dividend per share at the normal rate of return or cost of equity. If only a part of the earning is paid out as dividends the market value of share under this method is much below than the value computed under the capitalization of earning method. Therefore, this model is suitable in cases where dividend pay out ratio is one hundred percent and there is no growth in the rate of earnings (Pandey, 1979: 97).

Constant Growth

In case, dividends of the company are expected to grow at a constant rate over time, the constantly growing dividend stream is to be evaluated using an appropriate compound growth factor:

$$D_t = D_o (1+g)^t$$

Where,

g=Periodic constant growth rate

The rate of dividend declared in the current year (D_t) would become equal to the previous year's rate of Dividend (D_0) plus growth rate during the year. Therefore, the present value (current market value of equity) of the growing dividend stream over n finite interval is: (Timilsina, 2001:02).

$$P_0 = \sum_{t=1}^n \frac{D_0 (1+g)^t}{(1+K_e)^t}$$

When g is less than K_e , the model can be presented as:

$$P_0 = \frac{D_0 (1+g)}{K_e - g} = \frac{D_1}{K_e - g}$$

2.2.2 Variable Growth

Not all firms are zero growth or constant growth firms. Most of the firms confirm to variable growth rate of dividends in future. However, it is very difficult to predict the future growth path of a company beyond a few years. Therefore, a particular rate of dividend is projected for each of the next few years (say, 3 years) and again another rate of dividend could be projected for further 3 years. Thus, the value of share (at $t = 0$) under this model is: (Shrestha, 1999)

$$P_0 = \frac{D_0 (1+G_1)^{t_1}}{(1+K_e)^{t_1}} + \dots + \frac{D_2 (1+G_3)^{t_3}}{(1+K_e)^{t_3}} + \frac{D_3 (1+G_4)^{t_4}}{(1+K_e)^{t_4}} + \dots + \frac{D_5 (1+G_6)^{t_6}}{(1+K_e)^{t_6}}$$

$$P_0 = \sum_{t=1}^n \frac{D_0 (1+g_1)^t}{(1+K_e)^t} + \frac{1}{(1+K_e)^n} \left[\frac{D_0 (1+g_1)^n (1+g_2)}{K_e - g_2} \right]$$

$$P_0 = \sum_{t=1}^n \frac{D_0 (1+g_1)^t}{(1+K_e)^t} + \left[\frac{1}{(1+K_e)^n} \right] P_n$$

(Poudel, 2001) conducted a study on *Investing in Shares of Commercial Banks in Nepal; An assessment of Return and Risks Elements*. He published an article with a heading "Capital Market Development and Stock Price Behavior in Nepal" in the Economic Review in April 2002. The following is the main part of the study.

This model states that the value of the share now is the sum of stream of future discounted dividends, plus the value of the share as and when sold in some future year. Therefore, the value of a share today is a function of the cash inflows expected by the investors and the risk associated with the cash inflows:

$$V_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} + \frac{D_3}{(1+K)^3} + \frac{D_t}{(1+K)^n}$$

Where,

V_0 = Intrinsic or the theoretical value of stock today

D_t = dividend expected in nth year

K = firm's cost of equity capital

The equation stated above assumes that dividend will grow at a given rate and the amount of dividend will be different in different years. A zero growth stock is a stock from which the investor expects a constant amount of dividend each year and where the dividend is not expected to grow. In such case the price of the stock now, V_0 is calculated by dividing the amount of dividend by the cost of equity.

$$V_0 = \frac{D}{k}$$

(Economic Review, April 2001)

2.3 Review of Thesis

(Timilsina, 1997) had conducted the study on "*Dividend and Stock Prices: an Empirical Study*" by sample testing the data of 16 Enterprises using data from 1990 to 1994. The study was conducted to test the relationship between dividends per share and stock prices, to determine the impact of dividend policy on stock prices and to identify where it is possible to increase the market value of the stock by changing dividend policy or payout ratio. To explain price behavior, the study used simultaneously equation model as developed by (Friend and Puckett, 1964). The findings of study were as follows:

- a) The relationship between dividend per share and stock prices is positive in the sample companies.
- b) Dividend per share affects the share prices variedly in different sectors
- c) Changing the dividend policy or dividend per share might help to increase the market price of share.
- d) The relationship between stock prices and retained earnings per share is not prominent.
- e) The relationship between stock prices and lagged earnings price ratio is negative

(Adhikari, 1997) carried out a study on *"Corporate Dividend Practices in Nepal"* using primary as well as secondary data. The main objectives of study were to analyse the properties of portfolios formed on dividend, to examine the relationship between dividend and stock prices and to survey the opinions of financial executives on corporate dividend practices. Major findings of this study are:

- a) Financial position of high dividend paying companies is comparatively better than that of low dividend paying companies.
- b) Market price of stock of both finance and non finance and non finance sectors are affected by dividends.
- c) There is a positive relationship between dividend and stock price
- d) There is a negative relationship between dividend payout and earnings before tax to net worth.
- e) Stocks with larger ratio of DPS to book value per share have higher profitability.
- f) These profitability ratios of stocks paying larger dividends are also more variable as compared to stocks paying smaller dividends.
- g) Companies paying higher are reluctant to employ higher degree of leverage in their capital structures
- h) The stocks with larger ratio of dividend per share to book value per share have also higher turnover ratio and higher interest coverage.

(Gautam, 1997) carried out a study on *"Dividend Policy in Commercial Banks"* which focuses on the objectives to identify the type of dividend policy that is being adopted and to find out whether the policy is appropriate to examine the impact of dividend on share price, to identify the relationship between DPS and other financial indicators, to know if there is any uniformity among DPS, EPS and DPR sampled commercial Banks. The major

findings of this study are there is the largest fluctuation in EPS and DPS, the relationship between DPS and EPS is positive; however it is not significant, there may be various other factors beside EPS to affects MPS and the growth rate of dividend is inconsistent. It concluded that no sampled commercial banks have followed distinctly defined dividend policy.

(Sharma Rajopadhyaya, 2002) conducted a study on *"Dividend Policy with Respect to Insurance Companies in Nepal"* in July 2002. The objectives of this research were to identify the existing practice of dividend policy in insurance companies, to find out the impact of dividend per share of the market price of the stock, to examine whether there is significant different or not among DPS, EPS and DPR on the selected companies and to know if there is any relationship between market value per share (MVPS) on dividend policy and other financial indicator such as DPS, EPS, DPE, PE Ratio, Liquidity ratio

Some major Findings of the study are pointed out as the average DPS and EPS of NLGICO and NICO is satisfactory compared to ICO and UICO. Since, later insurance companies are new in dividend distribution. The analysis of coefficient of variation indicates largest fluctuation in PICO and UNICO, and the dividend yield analysis fluctuating in all sample insurance companies.

(Budhathoki, 2006) carried on a study on *"The Study of Dividend Policy of the Commercial Banks in Nepal"* on May 2006. The main objectives of the study were to highlight the dividend practices of Commercial Banks, to compare the dividend policy followed by different commercial banks chosen, to provide the sample banks with some fruitful suggestion that can be implemented easily and possible guideline to overcome various issues and gaps based on the findings of the analysis. Some of the major findings of this study are: The average earning per share (EPS) of the banks under study shows a positive result. But the coefficient of variation indicates that there is no consistency of EPS.

- a) The average dividend per share (DPS) shows that there is no regularity in dividend payment.
- b) The analysis of DPR shows that the Dividend Payout Ratio (DPR) of the banks is not stable.
- c) The average market price shows that there is quite high level of fluctuation.

(Pandey, 2008) conducted a study “*Pricing and Yield Behavior of Equity Shares in Nepal: A Case of Commercial Banks*” on March 2008. The main objectives of the study are:

- a) To establish relationship between market prices of commercial bank's equity shares and their yield behavior in Nepal.
- b) To see how effective is yield in determining the market price of the securities?
- c) If yield is not the sole determining factor then what could be other factors, which could affect the market prices of securities in Nepal.
- d) To identify problems of securities market in Nepal and suggest measures to correct the existing problems. Main findings of this research are:
 - e) Market prices of the equity shares are overvalued when compared to the earnings per share, which is the primary indicator of the financial status of the concerned financial institution. This was mainly due to ignorance and improper access to financial health of the company.
 - f) The result of simple regression analysis between the market price and yield indicators reflected that net worth per share explained the best of the market prices compared to other indicators. Dividend per share and earnings per share were equally explanatory, whereas dividend payout ratio was not a good indicator of stock pricing. The result showed that market price corresponds to the earning per share at a greater extent and then to dividend per share and then to earnings per share.

2.4 Concluding Remarks

The empirical testing has been proved that ex-day stock price tend to fall by significantly less than the dividend. They interpret the result as consistent with a clientele effect where investors in high tax brackets show a preference for capital gains over dividends and vice versa.

Some argue that dividend policy of is irrelevant. It doesn't affect the wealth of the shareholder. They said that the value of the firm depends on the firms earning, which result from its investment policy. Dividend payments should have no impact on shareholders value in the absence of taxes and market imperfections.

Another study by Gordon on the dividend policy and market price of the stock and concluded that the dividend policy of a firm influences the market value of stock that explains the investor's preferred present dividend rather that future capital gains. He further explained that

the dividend policy has direct relation with the value of stock even if the internal rate of return is equal to the required rate of return.

2.5 Research Gap

This study work reflects the following research gap between the previous researches. None of the previous study analysis the impact of dividend on equity share pricing in Nepal. Most of the masters level thesis work was done by analyzing secondary data. They do not assess direct responses of the market. But this research work is mainly focused on analyzing the impact of dividend on equity share price. This thesis uses secondary data as well as primary data to analyze the impact of dividend in equity share pricing in Nepal. In the primary data presentation, Questionnaires were distributed among various secondary shares traders working in various organizations and the response of the individuals who own shares on secondary market was considered.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with collection, analysis and interpretation of facts and figures. Good and proper methodology is needed to carry out study works smoothly and to visualize all the works clearly and vividly.

3.1 Research Design

A research design is a plan of the proposed research work. This research attempts to analyze the impact of Dividend on the stock price behavior of financial institution and commercial banks. For this, several tools have been employed to accomplish such targets. The analysis has been divided into two sections – based on secondary data and on primary responses. In the first part, this research would explicitly examine the relationship between Market Price per Share (MPS) and Dividend per Share (DPS). For this, five bank would be selected on judgmental basis, considering the years' of operation and listing in NEPSE, institution type, number of shareholders, and paid up capital among others. For the comparative purpose, the relationship of MPS with Dividend Payout Ratio (DPR), Net Worth per Share (NWPS) and Earning per Share (EPS) will also be calculated and presented. In the second part, which is an empirical analysis, the responses of primary respondent would be analyzed.

This study is designed as an descriptive as well as case study research so as to find out the impact on the market price of common stock of a company when dividend is paid to shareholders and also how the market price respond when dividend is not paid to the shareholders .In other words, the study is related to the dividend policy and its impact on the share-price and wealth position of the shareholders. In this study descriptive analytical research design has done.

3.2 Population and Sample of the Study

All the companies listed in NEPSE from 2007-08 to 2011-12 are considered to be the total population of the study. Out of them Commercial Banks were considered as the sample of the study. The no. of listed companies reached 334 by the end of fiscal year 2011-12. For the purpose of this study, only 5 commercial banks are considered as sample population. The sample of the study is 1.5% percentage of the total population of commercial banks in Nepal.

For the basis of selecting companies under study, the market share in NEPSE has been considered. The data for 2011-12 shows that, commercial bank groups' trading constituted 11.11 percent of the total trading in NEPSE. The names of the Sampled

Financial Institutions are:

- Nabil Bank Limited
- Everest Bank Limited
- Himalayan Bank Limited
- Lumbini Bank Limited
- Nepal Investment Bank Limited

3.3 Sources of Data

3.3.1 Secondary Data

Data have been collected from primary as well as secondary sources. In secondary data, concerned banks, Nepal Stock Exchange Ltd. and Security Board of Nepal are providers of the data. The researcher collected various data from SEBON and NEPSE in various dates in the month of February. The sample period covers 2007-2012 for examining the relationship as well as for using different indicators. The data obtained are:

- a) The year ended data sheet showing MPS, EPS, NWPS, DPS, DPR, Balance sheet, Profit and loss a/c of the company.
- b) Information that is relevant to the study available on various websites (i.e. websites of NEPSE, Security Board of Nepal. Nepal Rastra Bank and other related banks and finance companies)
- c) Relevant Books, Journals, Magazines, Reports, Bulletins etc.
- d) Previous Thesis and Studies

3.3.2 Primary Data

An Empirical finding has been carried out in order to obtain the impact of dividend on equity share pricing in Nepal. 40 observations have been taken to analyze the impact of dividend on an equity share price. The responses of the respondents of Nepal Rastra Bank, Security Board of Nepal and various organizations have been collected by distributing the multiple choice questionnaire.

3.4 Data Analysis Tools

3.4.1 Methods of Analysis of Secondary Data

Dividend per Share (DPS)

Dividend per share is the net distributed profit to the shareholders. It is the ratio of distributed profit to the number of ordinary shares. It is calculated as:

$$\text{DPS} = \frac{\text{Amount distributed to Equity Shareholder}}{\text{Number of Equity Shareholders}}$$

Dividend per Share and the Dividend Payout Ratio depend upon the firms' dividend policy, which further depends on several internal factors such as fund needs of the firm, liquidity, ability to borrow, nature of shareholders, and market conditions.

Earnings per Share (EPS)

Earning per share measures the profit of equity shareholders in terms of per unit of shares .i.e. the amount that they have earned on every share held. It is calculated as the ratio of available profit to the number of outstanding shares.

$$\text{EPS} = \frac{\text{Net Profit}}{\text{Number of Existing Equity Shares}}$$

Dividend Payout Ratio (DPR)

This ratio shows the percentage of profit distribution to the shareholders in the form of dividend. It is the ratio between DPS and EPS

$$\text{DPR} = \frac{\text{DPS}}{\text{EPS}}$$

Net Worth per Share

Net Worth per Share is a measurement of the net worth of the company for each share of stock that has been issued. If this value is negative, this indicates that company's liabilities exceed its ability to pay them. An increasing net worth per share is a positive signal that the company has reduced its liabilities. The company may also have gone through a stock buy-back plan, reducing the number of shares, essentially making the net worth for each share more valuable.

Standard Deviation (SD)

The standard deviation is commonly used to measure the risk. It shows the deviation of actual mean with average mean. The standard deviation measures the absolute dispersion of variability of a distribution. The greater the variability or dispersion the greater would be the magnitude of the deviation of the value from their mean. The smaller the dispersion or variability, smaller would be the standard deviation. There would be high degree of uniformity in the observation and homogeneity in the series. Hence, the standard deviation is extremely useful in judging the representativeness of the mean we can find the Standard Deviation from the following formula.

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

Where,

x = value of the variable

n = numbers of years.

Therefore, the standard deviation is used to analyze the stock position of finance company and commercial banks. The SD of five companies are calculated and analyzed under the study.

Coefficient of Variance (CV)

The corresponding relative measure of dispersion is known as the coefficient of variation. The series for which the coefficient of variation is greater is said to be more variable or conversely less consistent or less uniform. On the other hand the series for which coefficient of variation is less is said to be less variable or more consistent or more uniform. It is denoted by CV and obtained as follows:

$$C.V = \frac{S.D}{\bar{X}} \times 100$$

Where

SD is the Standard Deviation and

\bar{X} = Mean of the series defined as $\frac{\sum x}{n}$

Karl Pearson's Coefficient of Correlation

It is statistical tool for measuring the magnitude of linear relationship between the two variables. Karl Pearson's measure, known as Pearson's correlation coefficient between two variables series x and y, denoted by $r(x,y)$ or r_{xy} . r can be obtained as:

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

Where,

r = correlation coefficient

n = no. of years.

X = Sum of Series X

Y = Sum of Series Y

XY = Sum of the product of X and Y variables

The value of coefficient of correlation always lies between +1 & -1. when coefficient of correlation (r) = +1, it means there is perfect positive correlation between the variables, when (r) = -1, it means there is perfect negative correlation between the variables and (r) = 0 refers that there is no relationship between the given variables. The coefficient of correlation finds not only the magnitude of correlation but also its direction. The closer the value of 'r' to 1 or -1, the strong will be the relationship between variables and the closer the 'r' to 0, weak will be the relationship Shrestha and Manandhar, (1999).

Regression Analysis

Regression analysis helps the estimation or prediction of unknown variable on the basis of known value of other variable. It is used as a tool to determine the strength of relationship between two variables. Thus, it is a statistical device, with the help of which we can estimate or predict the value of one variable when the value of other variable when the other variable is known. The unknown variables which we have to predict are called dependent variable and the variable whose value is known is called independent variable. The analysis used to describe the average relationship between two variables is known as simple regression analysis Bajracharya, (2060).

Line of Regression

If there exists a relationship between two variables X and Y, the dots the scatter diagram will be concentrating around a certain curve and will be concentrating around a certain curve and if the curve is a straight line, it is said to be the line of regression and the relationship between two variables as the linear regression. A line of regression gives the best estimate (in the least square sense) of one variable for any given value of other variable. So, there are two lines of regression referring as the line of regression of Y on X and the line of regression of X on Y respectively Bajracharya,(2060).

Regression of Equation X on Y

The regression equation is expressed as:

$$Y = a + bx$$

We shall get normal equations for estimating 'a' and 'b' as:

$$Y = na + b \sum x$$

$$\sum XY = a \sum X + b \sum x^2$$

Where,

Y = value of dependant variable

a = Y intercept

b = Slope of the trend line/coefficient of regression

X = Value of independent variable

Coefficient of Regression

The coefficient 'b', which is the slope of line of regression of y on x, is called the coefficient of regression of y on x. It represents the increment in the value of dependent y for a unit change in the value of independent variable x. In other words, it represents the rate of change. The convenient way to calculate the variable of 'b' is as:

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

Similarly the value of Y-intercept can be computed as:

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

$$n \sum x^2 - (\sum x)^2$$

Statistical Analysis

In this part, we will see the relationship between market price of the equity shares with earning per share, dividend per share, dividend pay out ratio, and net worth per share.

Amongst these four indicators, the study would evaluate which will affect the equity share price. In the calculation used by excel.

3.4.2 Methods of Analysis of Primary Data

Response of Individuals

An empirical study was carried out to receive a response of the individuals who own equity shares. A questionnaire was used to collect the view of the shareholders. The questionnaire was distributed to 40 persons representing several sectors like NRB, SEBON, NEPSE, etc. which are shareholders and staff of the banks. The responses of only 40 responses were used for the purpose of analysis as these respondents had purchased equity shares from the secondary market. Others had purchased shares from the primary market. The questionnaire focused on the behavior of the investors while purchasing the equity shares in the secondary market. The questionnaire examines if the investor analyses financial health of the institution or not, if the investor cares the overall market or not and several other aspects that a good investor is supposed to look at.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

In this chapter, the collected data are presented, analyzed and interpreted following the research methodology dealt in the third chapter. While analyzing, data gathered from various sources have been inserted in the tabular form in Annex. The basic objective of this chapter is to analyze and explain the collected data following the conversion of unprocessed data to an understandable presentation. Thus this chapter presents the analysis of Impact of dividend on Equity share price various financial institutions.

4.1 Presentation and Analysis of Secondary Data

4.1.1 Analysis of Financial Indicator

a. Earnings per Share (EPS)

Earnings per share measures the profit of equity shareholders in terms of per unit of shares i.e. the amount that they have earned on every share held. It is calculated as the ratio of available profit to the number of outstanding shares.

Table 4.1

Analysis of Earning Per Share of the Banks

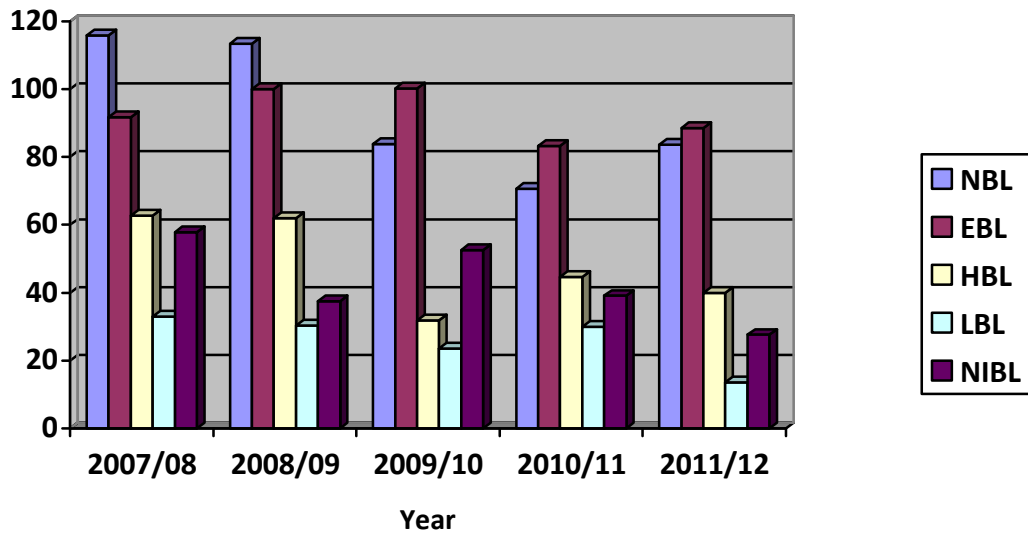
| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|--------|--------|-------|-------|-------|
| 2007-08 | 115.86 | 91.82 | 62.74 | 32.91 | 57.87 |
| 2008-09 | 113.44 | 99.99 | 61.9 | 30.31 | 37.42 |
| 2009-10 | 83.81 | 100.16 | 31.8 | 23.49 | 52.55 |
| 2010-11 | 70.67 | 83.18 | 44.66 | 29.98 | 39.1 |
| 2011-12 | 83.57 | 88.55 | 39.94 | 13.53 | 27.6 |
| Mean | 93.47 | 92.74 | 48.21 | 26.04 | 42.91 |
| SD | 20.07 | 7.37 | 13.68 | 7.81 | 12.20 |
| CV | 21.47 | 7.95 | 28.38 | 29.99 | 28.43 |

See: Annex II

The table 4.1 shows the Earning per share of all of the financial institutions taken in this study. The table also shows the standard deviation as well as the coefficient of variation of the EPS covering the period from FY 2007-08 to 2011-12. In this table, among the commercial banks, Nabil Bank Limited has the highest EPS throughout the study period. The

average EPS of NBL is 93.47, SD is 20.07 and CV is 21.47, which shows that there is a low fluctuation in EPS of Nabil Bank Limited. Everest Bank has increasing EPS each year. EPS of Lumbini Bank negative till 2007-08. After this year EPS is positive and at last year decrease to 31.25.

Figure 4.1
Analysis of Earning Per Share of the Banks



b. Market Price per Share (MPS)

Market price per share (MPS) is a prevailing price of the equity share trading in the secondary market. The price listed in the stock exchange is the actual market price of equity shares. The analysis of the Market price of the equity shares of the financial institutions are presented below.

Table 4.2

Analysis of Market Price per Share of the Banks

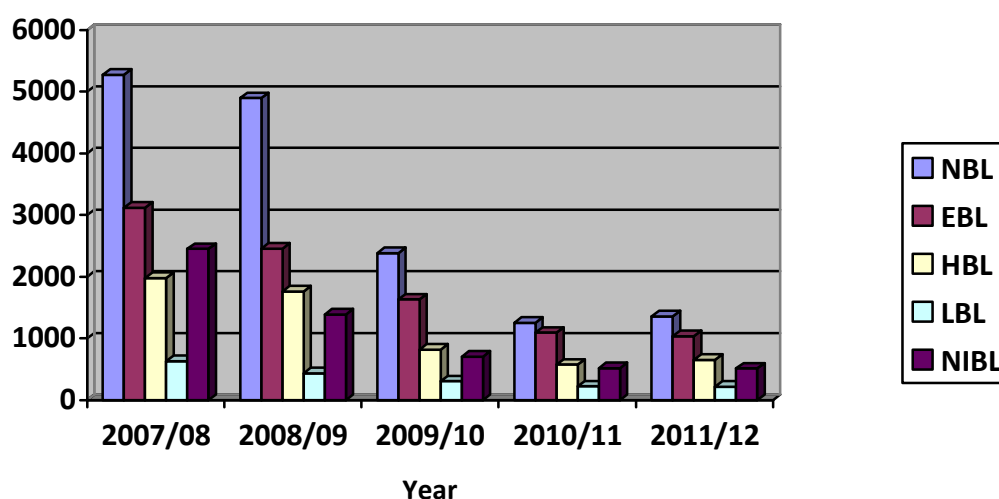
| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|---------|--------|--------|--------|--------|
| 2007-08 | 5275 | 3122 | 1980 | 631 | 2,450 |
| 2008-09 | 4899 | 2455 | 1760 | 435 | 1,388 |
| 2009-10 | 2384 | 1630 | 816 | 303 | 705 |
| 2010-11 | 1252 | 1094 | 575 | 221 | 515 |
| 2011-12 | 1355 | 1033 | 653 | 213 | 511 |
| Mean | 3033 | 1866.8 | 1156.8 | 360.6 | 1113.8 |
| SD | 1931.15 | 904.16 | 661.43 | 175.53 | 829.11 |
| CV | 63.67 | 48.43 | 57.18 | 48.68 | 74.44 |

See: Annex III

The table 4.2 shows the market price of equity shares of each of the financial institutions taken for this study. Among the commercial banks, the average Market price of NABIL Bank Limited is highest i.e.3033. It has a standard deviation of 1931.15 and coefficient of variation is 63.67. LBL has lowest average MPS i.e. 360.6. The SD of LBL is 175.53 and C.V is 48.68. HBL Bank Ltd. has an average MPS of 1156.80 It has a 661.43 Standard Deviation and CV of 57.18. This is more fluctuating than the two banks.

Figure 4.2

Analysis of Market Price Per Share of the Banks



c. Dividend per Share (DPS)

Dividend per share indicates the proportion of earning distributed to the shareholders on per share basis. Generally, higher DPS creates positive attitude among the shareholders towards the bank, which accordingly helps to increase the market value of shares. The dividends per share of the financial institutions under study are stated in the following table.

Table 4.3
Analysis of Dividend per Share of the Banks

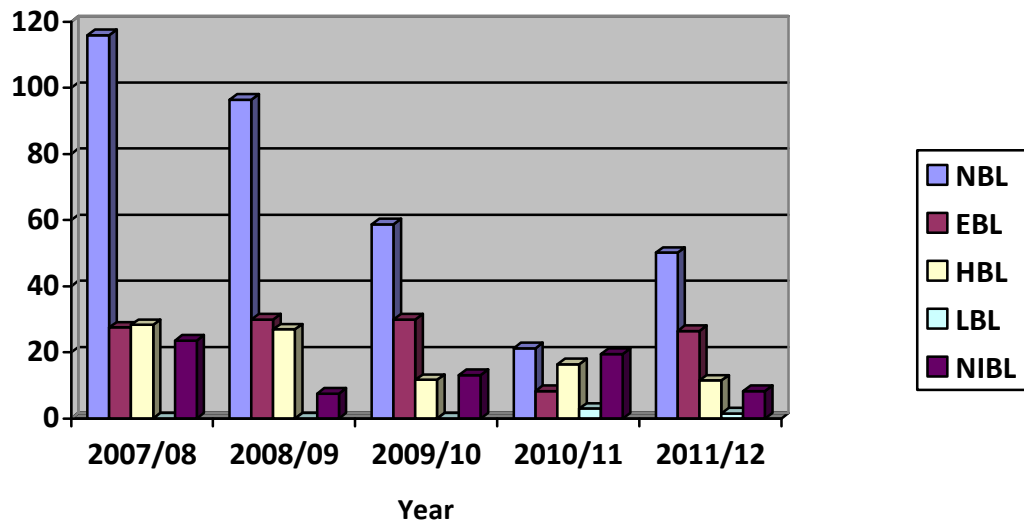
| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|--------|-------|-------|--------|-------|
| 2007-08 | 115.86 | 27.55 | 28.33 | 0 | 23.63 |
| 2008-09 | 96.42 | 30 | 26.96 | 0 | 7.48 |
| 2009-10 | 58.67 | 30.04 | 11.72 | 0 | 13.14 |
| 2010-11 | 21.20 | 8.32 | 16.43 | 3 | 19.55 |
| 2011-12 | 50.14 | 26.56 | 11.52 | 1.62 | 8.28 |
| Mean | 68.46 | 24.49 | 18.99 | 0.92 | 14.42 |
| SD | 37.73 | 9.17 | 8.15 | 1.36 | 7.05 |
| CV | 55.11 | 37.44 | 42.92 | 147.83 | 48.89 |

See: Annex IV

The table 4.3 shows Dividend paid by the financial institutions during the year 2007-08 to 2011-12. The average dividend of NBL is the highest i.e. 68.46. EBL has the second highest average dividend i.e. 24.49. The CV of LBL is the highest i.e. 147.83, which shows a highest fluctuation in DPS during the period of study. It has not paid dividend for three years. HBL Bank paid an average dividend i.e. 18.99 it has a Standard deviation of 8.15 and C.V is 42.92 LBL Bank Limited has a lowest DPR.

Figure 4.3

Analysis of Dividend per Share of the Banks



d

. Dividend Payout Ratio (DPR)

Dividend Payout Ratio shows the percentage of profit distributed to the share holders. It depends upon earnings of organization. Greater the earnings more will be the ability to pay dividend. The DPR of the financial institutions' under study are stated in the table as follows. For the 3rd objective to DPR of financial sectors, this table shows the DPR & DPS which makes the performance of Banks and impact of DPS on financial institutions also shows effect on EPS and price.

Table 4.4

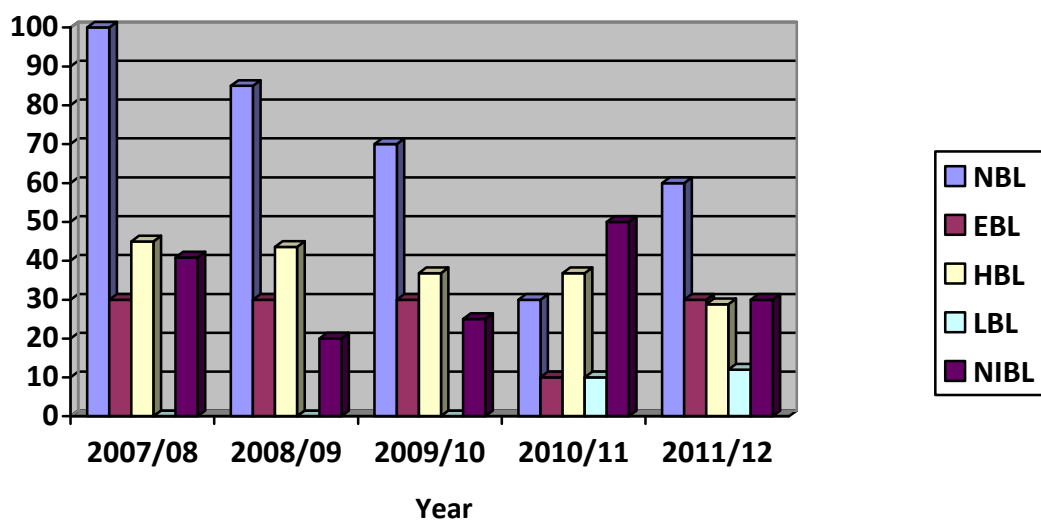
Analysis of Dividend Payout Ratio of the Banks

| Fiscal Year | NBL% | EBL% | HBL% | LBL% | NIBL% |
|-------------|-------|-------|-------|--------|-------|
| 2007-08 | 100 | 30 | 45 | 0 | 40.83 |
| 2008-09 | 85 | 30 | 43.56 | 0 | 20 |
| 2009-10 | 70 | 30 | 36.84 | 0 | 25 |
| 2010-11 | 30 | 10 | 36.84 | 10 | 50 |
| 2011-12 | 60 | 30 | 28.84 | 12 | 30 |
| Mean | 69 | 26 | 38.22 | 4.4 | 33.17 |
| SD | 26.55 | 8.94 | 6.45 | 6.07 | 12.17 |
| CV | 38.48 | 34.38 | 16.88 | 137.95 | 36.69 |

See: Annex V

In the table 4.4, the average DPR of NBL is 69 which is the highest DPR. It means that NBL generally pays 69 % of its total earning as dividend to its shareholders. LBL Bank has a lowest DPR i.e 4.4%. The coefficient of variation in the DPR of HBL bank is the lowest i.e.16.88 which shows a very low fluctuation. NBL, EBL, NIBL bank has also low fluctuation in the DPR. There is a maximum fluctuation in the DPR of LBL. It has not paid dividend for three years.

Figure 4.4
Analysis of Dividend Payout Ratio of Sampled of the Banks



4.1.2 Correlation Coefficient Analysis

The following tables are presented to analyze the relationship between Market Price per share and other financial indicators DPS, DPR and EPS by correlation coefficient. The correlation coefficient helps to determine whether there exists any relationship among different variables.

Interpretation of Correlation Coefficient:

It lies always between +1 and -1.

Where,

$r = +1$, there is perfect positive correlation

$r = -1$, there is negative correlation

$r = 0$, there is no correlation

Where, r lies between 0.7 to 0.999 (-0.7 to -0.999) then a high degree of positive (or negative) correlation.

Where, r lies between 0.5 to 0.699, there is a moderate degree of correlation

Where, r is less than, 0.5, there is low degree of correlation.

Table 4.5

Correlation Coefficient Analysis between MPS and DPS of the Banks

| S.No | Name of the Bank | Correlation Coefficient |
|------|-----------------------|-------------------------|
| 1 | Nabil Bank | 0.9598 |
| 2 | Everest Bank | 0.4987 |
| 3 | Himalayan Bank | 0.9376 |
| 4 | Lumbini Bank | -0.6910 |
| 5 | Nepal Investment Bank | 0.4945 |

See: Annex VI, VII, VIII, IX, X

The table 4.5 clearly shows the degree of relationship between MPS and DPS. The degree of relationship between MPS and DPS seems to be significant in all of the above listed institutions except in the case of LBL. Where, correlation coefficient recorded as - 0.6910

Table 4.6

Correlation Coefficient Analysis between MPS and EPS of the Banks

| S.No | Name of the Bank | Correlation Coefficient |
|------|-----------------------|-------------------------|
| 1 | Nabil Bank | 0.9737 |
| 2 | Everest Bank | 0.4588 |
| 3 | Himalayan Bank | 0.8852 |
| 4 | Lumbini Bank | 0.6600 |
| 5 | Nepal Investment Bank | 0.6437 |

See: Annex XI, XII, XIII, XIV, XV

The table 4.6 shows the degree of relationship between MPS and EPS. The degree of relationship between MPS and EPS seems to be highly positive in Nabil Bank, Himalayan Bank, In NIBL, EBL, LBL, the correlation coefficient between MPS and EPS is comparatively low.

Table 4.7

Correlation Coefficient Analysis between MPS and DPR of the Banks

| S.No | Name of the Bank | Correlation Coefficient |
|------|-----------------------|-------------------------|
| 1 | Nabil Bank | 0.8936 |
| 2 | Everest Bank | 0.4778 |
| 3 | Himalayan Bank | 0.8677 |
| 4 | Lumbini Bank | -0.7436 |
| 5 | Nepal Investment Bank | 0.0445 |

See: Annex XVI, XVII, XVIII, XIX, XX

The table 4.7 shows the degree of relationship between MPS and DPR. In positive correlation, if independent variable increases then it causes to increase dependent variable by 100 % and vice-versa. Here, MPS is dependent variable and DPR is independent variable. The degree of relationship between MPS and DPR of Lumbini Bank ltd. is highly negative.

Table 4.8

Regression Analysis between MPS and DPS

| S.No | Name of the Bank | Regression Coefficient | | Equation (y= a+bx) |
|------|-----------------------|------------------------|----------|--------------------------|
| | | Constant (a) | Slope(b) | |
| 1 | Nabil Bank | 11.59 | 0.01875 | DPS = 11.59 + 0.01875MPS |
| 2 | Everest Bank | 15.05 | 0.00506 | DPS = 15.05 + 0.00506MPS |
| 3 | Himalayan Bank | 5.62 | 0.01156 | DPS = 5.62 + 0.01156MPS |
| 4 | Lumbini Bank | 2.85 | -0.00534 | DPS = 2.85 - 0.00534MPS |
| 5 | Nepal Investment Bank | 9.74 | 0.00420 | DPS = 9.74 + 0.00420MPS |

See: Annex XVI, XVII, XVIII, XIX, XX

The table 4.10 shows the major output of simple regression between Market Price and Dividend Per share of the sampled Banks. The regression coefficient (b) of Nabil Bank, Everest Bank, Himalayan Bank, Nepal Investment Bank is positive of 0.01875, 0.00506, 0.01156, and 0.00420 respectively. It indicates positive relationship between market price and DPS. But the value of b is negative in Lumbini Bank i.e.,-0.00534. Which means, if DPS decreases by 0.534% then it leads to increase MPS by 100% and vice versa? In case of slope, if one variable increases then other variable decreases.

4.1.3 Regression Equation of MPS and EPS

Table 4.9

Regression Equation of MPS and EPS

| S.No | Name of the Bank | Regression Coefficient | | Equation (y= a+bx) |
|------|-----------------------|------------------------|----------|--------------------------|
| | | Constant (a) | Slope(b) | |
| 1 | Nabil Bank | 62.77 | 0.01012 | EPS = 62.77 + 0.01012MPS |
| 2 | Everest Bank | 85.76 | 0.00374 | EPS = 85.76 + 0.00374MPS |
| 3 | Himalayan Bank | 27.03 | 0.01831 | EPS = 27.03 + 0.01831MPS |
| 4 | Lumbini Bank | 15.46 | 0.02936 | EPS = 15.46+ 0.02936MPS |
| 5 | Nepal Investment Bank | 32.35 | 0.00948 | EPS = 32.35 + 0.00948MPS |

See: Annex VI, VII, VIII, IX, X

The tale 4.11 shows the regression equation drawn between MPS and EPS of the 5 sampled institutions. Here, EPS is independent variable and MPS is the dependent variable. With the help of these indicators, we can obtain the slope (b) and the intercept (a) of the equation $y= a+bx$. Here, Y is EPS. In the above table, we can see that regression coefficient (b) is positive in Nabil Bank, Everest Bank, Himalayan Bank, Lumbini Bank and Nepal Investment Bank i.e. 0.01012, 0.00374, 0.01831, 0.02936 and 0.00948 respectively. They indicate that there exists positive relationship between EPS and MPS.

4.1.4 Regression Equation of MPS and DPR

Table 4.10

Regression Analysis between MPS and DPR

| S.No | Name of the Bank | Regression Coefficient | | Equation (y= a+bx) |
|------|-----------------------|------------------------|----------|--------------------------|
| | | Constant (a) | Slope(b) | |
| 1 | Nabil Bank | 31.72 | 0.01229 | DPR = 31.72 + 0.01229MPS |
| 2 | Everest Bank | 17.17 | 0.00473 | DPR = 17.17 + 0.00473MPS |
| 3 | Himalayan Bank | 28.43 | 0.00846 | DPR = 28.43 + 0.00846MPS |
| 4 | Lumbini Bank | 13.67 | -0.02570 | DPR = 13.67 - 0.02570MPS |
| 5 | Nepal Investment Bank | 32.44 | 0.00065 | DPR = 32.44 + 0.00065MPS |

See: Annex VI, VII, VIII, IX, X

The table 4.12 shows the regression equation drawn between MPS and DPR of the 5 sampled institutions. Here, DPR is independent variable and MPS is the dependent variable. With the help of these indicators, we can obtain the slope (b) and the intercept (a) of the equation $y= a+bx$. Here, Y is DPR. In the above table, we can see that regression coefficient (b) is positive in Nabil Bank, Himalayan Bank, Everest Bank, Nepal Investment Bank i.e.

0.01229, 0.00473, 0.00846 and 0.00065 respectively. They indicate that there exists positive relationship between market price and DPR. The slope (b) of Lumbini Bank is negative. i.e., -0.02570 which means that there exist negative relationship between MPS and DPR which demonstrate that if DPR (independent variable) decreases by 2.57% it leads to increase MPS by 100% and vice versa.

4.2 Presentation and Analysis of Primary Data

4.2.1 Empirical Study: Response of Individuals

An empirical study was carried out to receive a response of the individuals who own equity shares. A questionnaire was used to collect the view of the shareholders. The questionnaire was distributed to 40 persons representing several sectors like NRB, SEBON, NEPSE, etc. which are shareholders and staff of the banks. The responses of only 40 responses were used for the purpose of analysis as these respondents had purchased equity shares from the secondary market. Others had purchased shares from the primary market. The questionnaire focused on the behavior of the investors while purchasing the equity shares in the secondary market. The questionnaire examines if the investor analyses financial health of the institution or not, if the investor cares the overall market or not and several other aspects that a good investor is supposed to look at. The number of respondents is shown in the table below.

Table 4.11
Composition of Respondents

| S. No. | Descriptions | Number | Percentage |
|--------|------------------------------------|--------|------------|
| 1. | Respondents by sex | 40 | 100 |
| | Male Respondent | 32 | 80 |
| | Female Respondent | 8 | 20 |
| 2. | Respondents by Age | 40 | 100 |
| | 13 Age less than 25 | 6 | 15 |
| | Male Respondent | 6 | |
| | Female Respondent | - | |
| | Age 25 to 50 | 25 | 62.5 |
| | Male Respondent | 25 | |
| | Female Respondent | - | |
| | Age above 50 | 9 | |
| | Male Respondent | 9 | 22.5 |
| | Female Respondent | | |
| 3. | Respondents by owning shares | 40 | 100 |
| | In only one financial institution | 8 | 20 |
| | In multiple financial institutions | 32 | 80 |

Source: Field Survey 2013

The table 4.11 describes the respondents by their sex and age. We can see that the investors are mostly male investors. Investors of age more than 50 are those who are very experienced in trading of the equity shares and those who want to invest their retirement fund all the way through the equity share investment. Most of the investors turn out to be holding the shares of more than one financial institution. The investor, who is aware of investing in equity share, goes on searching the prospect to invest more in shares. The above table shows that there are more respondents who invest in multiple financial institutions rather than only one institution. The responses of the questionnaire given by equity share investors are analyzed below.

The first question was “What inspired you to invest in the equity shares in Secondary Market?” The response is shown in the following table.

Table 4.12

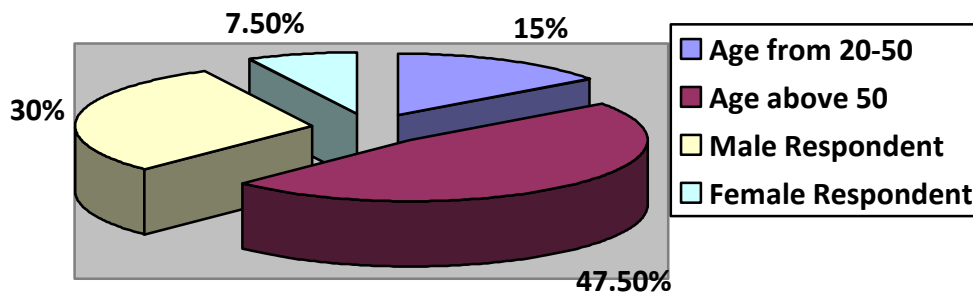
What inspired you to invest in the equity shares in Secondary Market?

| Options | Description | No. of Responses | Percentage |
|---|-------------------|------------------|------------|
| a. Lack of alternative Investment | By age 25 to 50 | 6 | 15 |
| b. Prospects of higher share prices in future | By age above 50 | 19 | 47.5 |
| c. Future benefits from the institutions | Female Respondent | 12 | 30 |
| d. Prevailing share prices | Male Respondent | 3 | 7.5 |
| Total | | 40 | 100 |

Source: Field Survey 2013

Figure 4.5

What inspired you to invest in the equity shares in Secondary Market?



Most of the responses were on behalf of prospects of higher share price in future. This shows that these people were looking for capital gains from equity shares. Such responded counted at 47.5 percent of the total respondent. Furthermore, 7.5 percent of the respondents quoted prevailing market price of the equity shares as major reason for purchasing equity shares. Out of total respondents, 15 percent of the respondent said they purchased shares due to lack of alternative investment in the country and the remaining 30 percent said that they purchased shares with a hope that they can gain benefits from the banks in the form of bonus shares, right shares and cash dividends.

The second question dealt on the fact if the investors care for the financial health of the company or not. The question reads, “While investing, were you aware of the financial health of the institution?” The response is shown in the following table.

Table 4.13

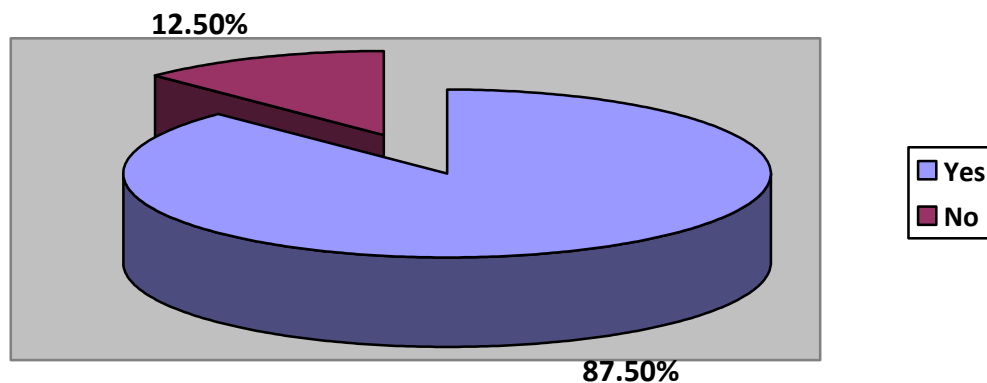
While investing, were you aware of the Financial Health of the Institution

| Options | No. of Respondents | % of Total |
|---------|--------------------|------------|
| Yes | 35 | 87.5 |
| No | 5 | 12.5 |
| Total | 40 | 100 |

Source: Field Survey2013

Figure 4.6

While investing, were you aware of the Financial Health of the Institution



Of the total respondents 87.5 percent said that they care for the financial health of the company. When asked “What you see on the financial health amongst profits, earning per share, dividend per share, net worth per share, dividend payout ratio and others if any”, the response was as: options No. of respondents % of total

37.5 percent of the respondents said they would look at the profitability of the company as financial health. Amongst them 30 percent said, they would also care for dividend per share, 15 percent said they would care for earning per share 7.5 percent would care for net worth per share and 5 percent would see the dividend payout ratio 5 percent of the respondents point out other financial indicators that include the management of the company and etc. Another question was further asked with the same topic.

Question number 3 was, “What factor amongst the financial health inspired you to purchase the equity shares in the Secondary Market?” The response to this question was shown as following. Options No of Responses % of total

Table 4.14

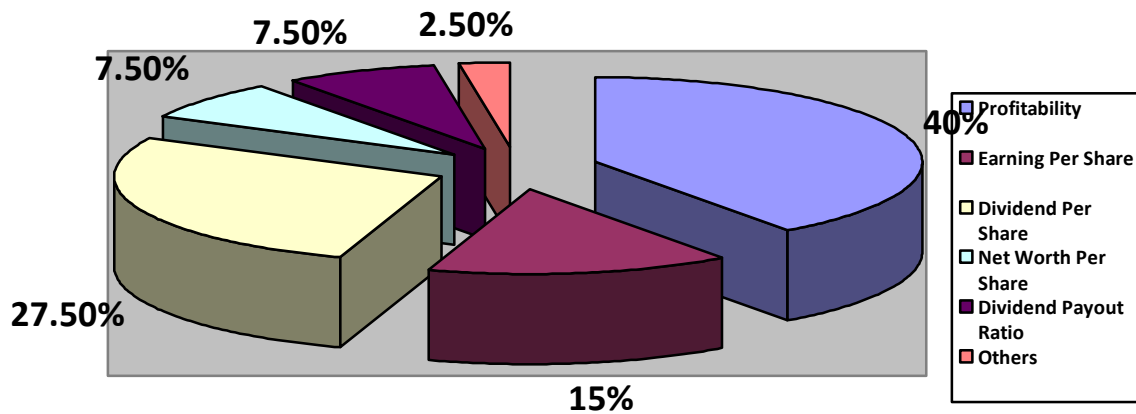
What factor amongst the financial health inspired you to purchase the equity shares in the Secondary Market

| Options | No. of Responses | % of Total |
|-------------------------|------------------|------------|
| a Profitability | 16 | 40 |
| b Earning per share | 6 | 15 |
| c Dividend per share | 11 | 27.5 |
| d Net worth per share | 3 | 7.5 |
| e Dividend payout Ratio | 3 | 7.5 |
| f Others (Specify)..... | 1 | 2.5 |
| Total | 40 | 100 |

Source: Field Survey 2013

Figure 4.7

What factor amongst the financial health inspired you to purchase the equity shares in the Secondary Market



40 percent of the respondents quoted the profitability behind their motive to buy equity share in the secondary market and 27.5 percent of the respondents said they are interested in dividend per share. They expressed their hope verbally that the bank would offer bonus shares in the future. All those who said they look at net worth per share, dividend payout ratio and other factors such as management and future growth while seeing financial health of the bank said that each of these factors were also the motives for the purchase of the equity shares. Amongst those who said they do not care for financial health while purchasing equity shares in the secondary market, there was one supporting question in question number 4, which read as, “If you were not aware of the financial health of the institution, why did you invest in the equity shares in Secondary Markets? [Respond if your answer to Q2 is no]” The response of 5 respondents who say no to question no. 2 While investing, were you aware of the financial health of the institution?

Table 4.15

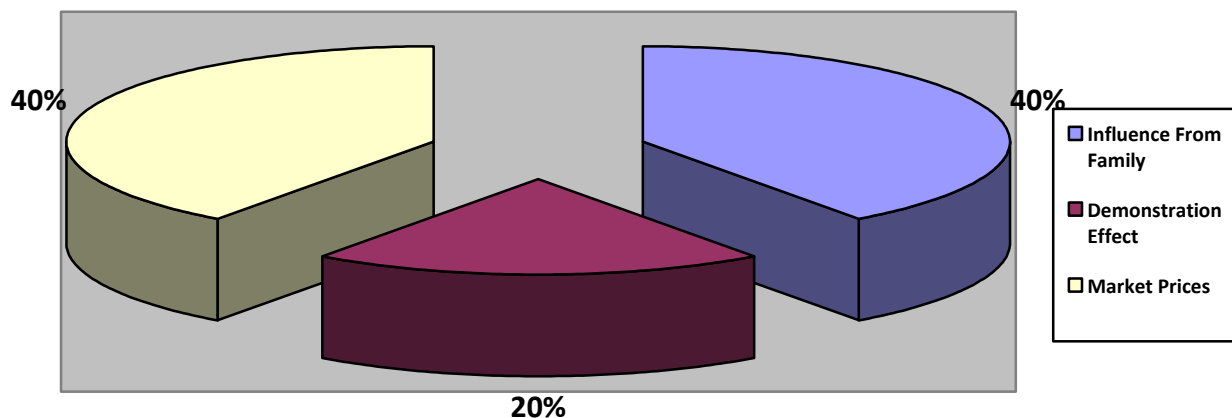
If you were not aware of the financial health of the institution, why did you invest in the Equity shares in Secondary Markets

| Options | No of Responses | % of Total |
|------------------------------|-----------------|------------|
| a. Influence from the family | 2 | 40 |
| b. Demonstration Effect | 1 | 20 |
| c. Market Prices | 2 | 40 |
| d. Others | 0 | - |
| Total | 5 | 100 |

Source: Field Survey 2013

Figure 4.8

If you were not aware of the financial health of the institution, why did you invest in the equity shares in Secondary Markets



Among those respondents who did not care the financial health, 40 % said that the market price of the bank and influence from the family were equal factors that made them invest in the equity shares. 30 percent of the respondents bought equity shares from the secondary market due to the demonstration effect – their friends and close relatives were purchasing equity shares quite regularly.

Question number 5 asked “If the investor were aware of other financial indicators such as NEPSE index, share market growth and other”. Most of the responses are yes. There is a total of 70 percent (28 responses) positive response. 30 percent (12 responses) of the response is

no, indicating that these group of respondents are not bothered with the other financial indicators in the share market. Amongst those who cared for other financial indicators the following are the indicators that they look into.

Table 4.16

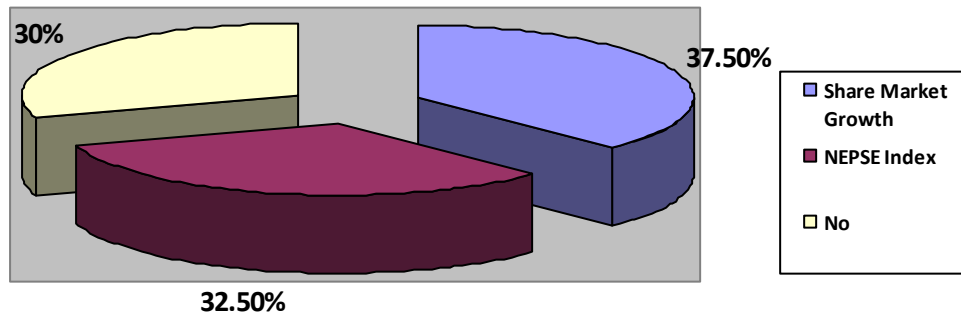
If the investor were aware of other Financial Indicators such as NEPSE Index, Share Market Growth and Others

| Options | No of Responses | % of Total |
|------------------------|-----------------|------------|
| a. Share Market growth | 15 | 37.5 |
| b. NEPSE Index | 13 | 32.5 |
| c. Other | 0 | - |
| d. No | 12 | 30 |
| Total | 40 | 100 |

Source: Field Survey 2013

Figure 4.9

If the investor were aware of other Financial Indicators such as NEPSE Index, Share Market Growth and Others



32.5 percent of the respondents said they look at the NEPSE index and 37.5 percent said that they look for the share market growth. Question number 6 was on the share investors' perception regarding the prices of the equity shares. This question was intended to see if the investors think that the share price that they are paying is just right or not. The response showed that a total of 62.5 percent (25 respondents) thought that the share prices were not just right and thus does not correspond to the financial health of the institution. Among these respondents 60 percent said the market price is overvalued, 24 percent said it is

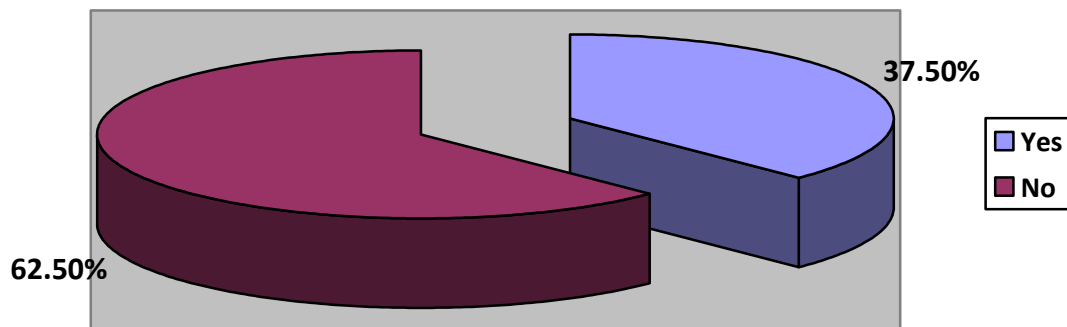
undervalued and 16 percent said they cannot answer this. The questions and their responses are shown in the following table.

Table 4.17
Do you think the Price that you pay correspond the
Financial Health of the Institution

| Options | No of Responses | % of Total |
|---------|-----------------|------------|
| a. Yes | 15 | 37.5 |
| b. No | 25 | 62.5 |
| Total | 40 | 100 |

Source: Field Survey 2013

Figure 4.10
Do you think the price that you pay correspond the
Financial Health of the Institution



This question was on the awareness of the share investors on all the directives issued by the Nepal Rastra Bank, securities board, Nepal Stock Exchange and relevant institutions. The question asked, “Are you aware of the notice, information and directives issued by the Securities Board, Nepal Stock Exchange and Nepal Rastra Bank?” the response showed that 70 percent were aware of these things and 30 percent were not aware of this information. The last question was on “How share investors rated the risk-factor in the share market”. The response is shown in the following table. Options No of Responses % of total

Table 4.18

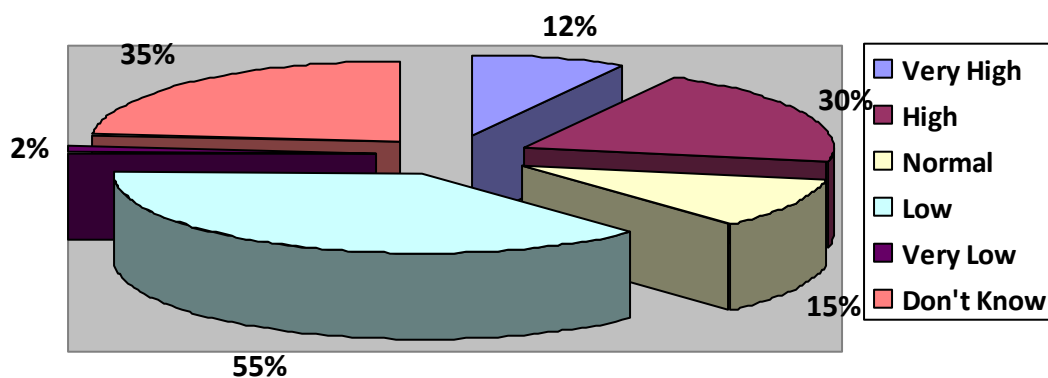
How Share Investors Rated the Risk-Factor in the Share Market

| Options | No of Responses | % of Total |
|---------------|-----------------|------------|
| a. Very High | 5 | 12 |
| b. High | 12 | 30 |
| c. Normal | 6 | 15 |
| d. Low | 2 | 5 |
| e. Very Low | 1 | 2 |
| f. Don't Know | 14 | 35 |
| Total | 40 | 100 |

Source: Field Survey 2013

Figure 4.11

How Share Investors Rated the Risk-Factor in the Share Market



35% of the respondents were unaware of the risk-factor in the share investment. Their response simply turned out to be I don't know. There was a mixed answer to this question. Most of the respondents who said they had some idea on the associated risk responded that the risk factor is higher (12 percent + 30 percent=42 percent). 15 percent of the responses were in favor of normal risk. Only seven percent of the responded said the risk is lower.

4.3 Major Findings of the Study

The main findings of the research work are summarized below:

- a) Among the commercial banks, Nabil Bank Limited has the highest EPS throughout the study period. The average EPS of NBL is 93.47, SD is 20.07 and CV is 21.47, which shows that there is a low fluctuation in EPS of Nabil Bank Limited. Everest Bank has increasing EPS each year. EPS of Lumbini Bank negative till 2007/08. After this year EPS is positive and at last year decrease to 31.25.
- b) Among the commercial banks, the average Market price of NABIL Bank Limited is highest i.e.3033. It has a standard deviation of 1931.15 and coefficient of variation is 63.67. LBL has lowest average MPS i.e. 360.6. The SD of LBL is 175.53 and C.V is 48.68. HBL Bank Ltd. has an average MPS of 1156.80 It has a 661.43 Standard Deviation and CV of 57.18. This is more fluctuating than the two banks.
- c) The average dividend of NBL is the highest i.e. 68.46. EBL has the second highest average dividend i.e. 24.49. The CV of LBL is the highest i.e. 147.83, which shows a highest fluctuation in DPS during the period of study. It has not paid dividend for three years. HBL Bank paid an average dividend i.e. 18.99 it has a Standard deviation of 8.15 and C.V is 42.92 LBL Bank Limited has a lowest DPR.
- d) The average DPR of NBL is 69 which is the highest DPR. It means that NBL generally pays 69 % of its total earning as dividend to its shareholders. LBL Bank has a lowest DPR i.e 4.4%. The coefficient of variation in the DPR of HBL bank is the lowest i.e.16.88 which shows a very low fluctuation. NBL, EBL, NIBL bank has also low fluctuation in the DPR. There is a maximum fluctuation in the DPR of LBL. It has not paid dividend for three years.
- e) The degree of relationship between MPS and DPS seems to be significant in all of the above listed Banks except in the case of Lumbini Bank. Where, correlation coefficient recorded as -0.6910
- f) The degree of relationship between MPS and EPS. The degree of relationship between MPS and EPS seems to be highly positive in Nabil Bank, Himalayan Bank, In NIBL, EBL, LBL, the correlation coefficient between MPS and EPS is comparatively low.
- g) The degree of relationship between MPS and DPR. In positive correlation, if independent variable increases then it causes to increase dependent variable by 100 % and vice-versa. Here, MPS is dependent variable and DRP is independent variable. The degree of relationship between MPS and DPR of Lumbini Bank ltd. is highly negative.

- h) The regression coefficient (b) is positive in Nabil Bank, Everest Bank, Himalayan Bank, Lumbini Bank and Nepal Investment Bank i.e. 0.01012, 0.00374, 0.01831, 0.02936 and 0.00948 respectively. They indicate that there exists positive relationship between EPS and MPS.
- i) The regression coefficient (b) of Nabil Bank, Everest Bank, Himalayan Bank, Nepal Investment Bank is positive of 0.01875, 0.00506, 0.01156, and 0.00420 respectively. It indicates positive relationship between market price and DPS. But the value of b is negative in Lumbini Bank i.e., -0.00534. Which means, if DPS decreases by 0.534% then it leads to increase MPS by 100% and vice versa? In case of slope, if one variable increases then other variable decreases.
- j) The regression coefficient (b) is positive in Nabil Bank, Himalayan Bank, Everest Bank, Nepal Investment Bank i.e. 0.01229, 0.00473, 0.00846 and 0.00065 respectively. They indicate that there exists positive relationship between market price and DPR. The slope (b) of Lumbini Bank is negative. i.e., -0.02570 which means that there exist negative relationship between MPS and DPR which demonstrate that if DPR (independent variable) decreases by 2.57% it leads to increase MPS by 100% and vice versa.
- k) Among the total respondents, 87 percent of the share investors cared on the financial health of the company before purchasing equity shares from the secondary market. Amongst the financial health all investors cared for the profitability of the institution. It was found that 75 percent of the respondents care for dividend per share.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Every firm is established to earn profit. Among the total net profit earned each firm divides its net earning into retained earnings and dividend. Dividend is defined as that portion of the net earnings of the firm, which is distributed to the stockholders either in the form of cash or stock as per its dividend policy. General public invest in equity share with an expectation of good returns in future in the form of capital gains, dividends or growth in terms of share holding. The financial performance of the institution and other economical and financial factors mostly affects the decision to invest in equity shares. Other factors like market imperfection, lack of awareness of the investor, lack of skills to analyze the financial health and unhealthy market competition may lead to fake decision while purchasing equity shares.

The Market price of equity shares is affected by various financial indicators like Dividend per share, earning per share, and net worth per share and dividend payout ratio. Therefore this study mainly examines relationship between market price of the equity share with Dividend per share, earning per share, net worth per share and dividend payout ratio. This study is mainly focused on whether dividend per share of the company affects market price of share or not? It has been noticed that there is a significant fluctuations in prices of corporate shares even without significant changes in profitability situation of the company. Amongst the listed companies in the Nepal Stock Exchange, commercial banks always hold a big position in overall trading. The trading - in terms of volume and amount - of the commercial banks make up to 80 percent of total transactions Finance companies and development banks hold second and third share in the trading in volume as well as in the amount. Therefore, study of 5 Banks was expected to reflect the overall stock market in Nepal.

This research encloses five commercial banks (Nabil Bank, Himalayan Bank, Everest Bank, Nepal Investment Bank and Lumbini Bank), both empirical analysis and statistical observations had been performed to carrying out this study. The secondary data was collected primarily from the annual reports of the Securities Board Nepal. The data was studied in order to obtain various financial performances, annual meetings, MPS, DPS, EPS, DPR, of the sampled Banks. The analysis of MPS, DPR, DPS, EPS was done which

showed that Nabil Bank Limited has the highest MPS and EPS throughout the study period.

The average dividend paid by Nabil Bank Ltd. is the highest (68.46). Among the Banks, Everest Bank has second highest dividend paid per share. The average DPR of NBL is 69 which is the highest DPR. Among the all, Nabil Bank and Himalayan Bank also show a very positive position. For the purpose of statistical analysis of the entire sample banks, Simple correlation and regression analysis is used to interpret the results. The data obtained were analyzed to run the separate set of regression analysis taking market price as the dependant variable and earnings per share, dividend per share, net\ worth per share and dividend payout ratio has been taken as independent variable. Simple regression analysis between the market price and other financial indicators (DPS, EPS, and DPR) reflected that net worth per share explained the best of the market prices compared to other indicators. Dividend per share and earnings per share were equally explanatory, whereas dividend payout ratio was not a good indicator of stock pricing. The result showed that market price corresponds to the earning per share at a greater extent and then to dividend per share and then to earnings per share.

When carrying out individual analysis of the commercial banks, the result drawn was that market prices of different banks correspond to different financial indicators. While market price of equity shares of some of the commercial banks was high with dividend per share, some had high correlation coefficient between market price and net worth per share. Correlation coefficient was significant between dividend payout ratio and market price in some of the cases. The empirical analysis was carried out on the basis of the responses of 40 share investors. The result of which is shown as follows. Most of the respondents were male respondents investing in more than one financial institution. They invest with an expectation of gaining more in future. They were more concerned with the purchase and sale of shares rather than holding for a longer period of time expecting dividend and bonus share returns. Among the total respondents, 87 percent of the share investors cared on the financial health of the company before purchasing equity shares from the secondary market. Amongst the financial health all investors cared for the profitability of the institution. It was found that 75 percent of the respondents care for dividend per share. 13 percent of the respondents who did not cared for financial health of the company were mainly due to ignorance, rather than due to high knowledge. This group of people bought shares mainly because those in the close circles were purchasing shares. They had little knowledge but were investing in the shares mainly as a result of demonstration effect. There was little

concern on other financial indicators, risk factors and the directives issued by the central bank, Nepal stock exchange, securities board and concerned commercial banks.

5.2 Conclusion

From this study, it has been concluded that there is not a single financial indicator that has a dominated role to determine MPS. One financial indicator that has significant role fixation in MPS for one company is not significant for another company. Dividend practices of all sample financial institutions are neither stable nor constantly growing. Haphazard way of distribution in growing trend is seemed in practice.

Different types of dividend are paid by the companies operating all over the world. They may be in different forms and basis. The main reason of the dividend payment is to provide the benefit to the shareholders of the company and to make them they are the part of the company. In Nepal, there is a practice of providing either stock dividend or cash dividend by the companies to their shareholders. From the study we find out that mainly the commercial banks of the Nepal are regular paying dividend. Being an “A” class financial institution, the majority companies under the development banks, financial institutions and insurance companies have not been able to pay dividend to its shareholders. Similarly, from the CV calculation also we saw that the companies paying the cash dividend are not paying consistently. Under the empirical testing it has been proved that ex-day stock price tend to fall by significantly less than the dividend. They interpret this result as consistent with a clientele effect where investors in high tax brackets show a preference for capital gains over dividends and vice versa.

But in Nepalese perspective the MPS of certain financial institutions is seen increased heavily on and after ex-dividend date.

From Karl Pearson’ correlation analysis we found, there is a very low degree of positive correlation between total listed companies and cash dividend paying companies. We have also found that the most of the companies are paying cash dividend and bonus share.

5.3 Recommendations

The findings of the study reveals that market prices of the equity shares are overvalued when compared to the earnings per share, which is the primary indicator of the financial status of the concerned financial institution.

- a) This was mainly due to ignorance and improper access to financial health of the company. It is recommended that the investors should be conscious while purchasing equity shares.
- b) Regulatory bodies should play greater role to disclose the financial status of the company on a regular basis. This can help the investors for proper judgment of the situation and for the calculation of expected market prices. As the empirical study revealed that there are significant numbers of share investors who do not know about the functioning of the securities market and are unaware of the market price setting mechanism, an intensive program to aware this group of share investors must be carried out by Nepal Stock Exchange and Securities Board Nepal.
- c) The present efforts to educate share investors have remained at low level. Since the access to internet in Nepal is quite low,
- d) It is recommended that Nepal Stock Exchange and Securities Board take on other measures such as printing leaflets and other information brochures to educate the share investors. The presence of rating agencies and disclosing the ratings of financial institutions on a regular basis can also help strengthen the equity market, as the market prices for high rated institutions would increased when compared to those having low level of ratings.

As this study has not considered the external factors such as investment climate, economic growth, growth of the financial system and others, it is recommended that a detailed study is carried out to observe the market price behavior in Nepal. This study can help identify the real factors that affect market price of equity shares, other than the financial health of the company itself.

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ANNEXURE

Annex - I

Questionnaire

1. What inspired you to invest in the equity shares in secondary market?
 - a) Lack of alternative investment
 - b) Prospects of higher share prices in future
 - c) Future benefits from the institution
 - d) Prevailing Prices

2. While investing, were you aware of the financial health of the institution?
 - a) Yes
 - b) No

3. What factor amongst the financial health inspired you to purchase the equity shares in the secondary market?
 - a) Profitability
 - b) Earnings per Share
 - c) Dividend per Share
 - d) Net Worth per Share
 - e) Dividend Payout Ratio
 - f) Others (Specify)

4. If you were not aware of the financial health of the institution, why did you invest in the equity shares in Secondary Markets? [Respond if yours answer to Q2 is no]
 - a) Influence from the family
 - b) Demonstration effect (purchase of shares in the close circles)
 - c) Market Prices
 - d) Others

5. If the investors were aware of other financial indicators such as NEPSE index, share market growth and others?
 - a) Yes
 - b) NEPSE Index
 - c) Others
 - d) No

6. If the share investor's perception regarding the prices of the equity shares. This question was intended to see if the investors think that the share price that they are paying is just right or not?

a) Yes

b) No

7. Do you think the price that you pay correspond the financial health of the institution?
[Respond if your answer to Q2 is yes].

a) Yes

b) No

8. How share investors rated the risk-factor in the share market?

a) Very High

b) High

c) Normal

d) Low

e) Very Low

f) Don't Know

Annex-II

Earning Per Share of the Banks

| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|--------|--------|-------|-------|-------|
| 2007/08 | 115.86 | 91.82 | 62.74 | 32.91 | 57.87 |
| 2008/09 | 113.44 | 99.99 | 61.9 | 30.31 | 37.42 |
| 2009/10 | 83.81 | 100.16 | 31.8 | 23.49 | 52.55 |
| 2010/11 | 70.67 | 83.18 | 44.66 | 29.98 | 39.1 |
| 2011/12 | 83.57 | 88.55 | 39.94 | 13.53 | 27.6 |
| Mean | 93.47 | 92.74 | 48.21 | 26.04 | 42.91 |
| SD | 20.07 | 7.37 | 13.68 | 7.81 | 12.20 |
| CV | 21.47 | 7.95 | 28.38 | 29.99 | 28.43 |

Annex-III

Market Price Per Share of the Banks

| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|---------|--------|--------|--------|--------|
| 2007/08 | 5275 | 3122 | 1980 | 631 | 2,450 |
| 2008/09 | 4899 | 2455 | 1760 | 435 | 1,388 |
| 2009/10 | 2384 | 1630 | 816 | 303 | 705 |
| 2010/11 | 1252 | 1094 | 575 | 221 | 515 |
| 2011/12 | 1355 | 1033 | 653 | 213 | 511 |
| Mean | 3033 | 1866.8 | 1156.8 | 360.6 | 1113.8 |
| SD | 1931.15 | 904.16 | 661.43 | 175.53 | 829.11 |
| CV | 63.67 | 48.43 | 57.18 | 48.68 | 74.44 |

Annex-IV

Dividend Per Share of the Banks

| Fiscal Year | NBL | EBL | HBL | LBL | NIBL |
|-------------|--------|-------|-------|--------|-------|
| 2007/08 | 115.86 | 27.55 | 28.33 | 0 | 23.63 |
| 2008/09 | 96.42 | 30 | 26.96 | 0 | 7.48 |
| 2009/10 | 58.67 | 30.04 | 11.72 | 0 | 13.14 |
| 2010/11 | 21.20 | 8.32 | 16.43 | 3 | 19.55 |
| 2011/12 | 50.14 | 26.56 | 11.52 | 1.62 | 8.28 |
| Mean | 68.46 | 24.49 | 18.99 | 0.92 | 14.42 |
| SD | 37.73 | 9.17 | 8.15 | 1.36 | 7.05 |
| CV | 55.11 | 37.44 | 42.92 | 147.83 | 48.89 |

Annex-V

Dividend Payout Ratio of Sampled of the Banks

| Fiscal Year | NBL% | EBL% | HBL% | LBL% | NIBL% |
|-------------|-------|-------|-------|--------|-------|
| 2007/08 | 100 | 30 | 45 | 0 | 40.83 |
| 2008/09 | 85 | 30 | 43.56 | 0 | 20 |
| 2009/10 | 70 | 30 | 36.84 | 0 | 25 |
| 2010/11 | 30 | 10 | 36.84 | 10 | 50 |
| 2011/12 | 60 | 30 | 28.84 | 12 | 30 |
| Mean | 69 | 26 | 38.22 | 4.4 | 33.17 |
| SD | 26.55 | 8.94 | 6.45 | 6.07 | 12.17 |
| CV | 38.48 | 34.38 | 16.88 | 137.95 | 36.69 |

Annex – VI

Simple Correlation and Regression Analysis between MPS & DPS

NABIL Bank Limited

| Fiscal Year | MPS (X) | DPS (Y) | XY | X ² | Y ² |
|-------------|-----------|-----------|-------------------|-----------------------------|-----------------------------|
| 2007/08 | 5275 | 115.86 | 611161.5 | 27825625 | 13423.54 |
| 2008/09 | 4899 | 96.42 | 472361.58 | 24000201 | 9296.81 |
| 2009/10 | 2384 | 58.67 | 139869.28 | 5683456 | 3442.16 |
| 2010/11 | 1252 | 21.20 | 26542.4 | 1567504 | 449.44 |
| 2011/12 | 1355 | 50.14 | 67939.70 | 1836025 | 2514.01 |
| N=5 | X = 15165 | Y =342.29 | XY =1317874.46 | X ² =60912811 | Y ² =29125.96 |

Mean $\bar{X} = 3033$

Mean $\bar{Y} = 68.46$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.9598$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

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

$$\sum XY = a \sum X + b \sum X^2$$

Solving these two normal equations we get,

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

$$= 0.01875$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 11.59$$

Annex – VII

Simple Correlation and Regression Analysis between MPS & DPS
Everest Bank Limited

| Fiscal Year | MPS (X) | DPS (Y) | XY | X ² | Y ² |
|-------------|----------|-----------|------------------|-----------------------------|----------------------------|
| 2007/08 | 3122 | 27.55 | 86011.1 | 9746884 | 759 |
| 2008/09 | 2455 | 30.00 | 73650 | 6027025 | 900 |
| 2009/10 | 1630 | 30.04 | 48965.2 | 2656900 | 902.40 |
| 2010/11 | 1094 | 8.32 | 9102.08 | 1196836 | 69.22 |
| 2011/12 | 1033 | 26.56 | 27436.48 | 1067089 | 705.43 |
| N=5 | X = 9334 | Y =122.47 | XY =245164.86 | X ² =20694734 | Y ² =3336.05 |

Mean \bar{X} = 1866.8

Mean \bar{Y} = 24.49

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.4987$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.00506$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$= 15.05$$

Annex – VIII
Simple Correlation and Regression Analysis between MPS & DPS
Himalayan Bank Limited

| Fiscal Year | MPS (X) | DPS (Y) | XY | X ² | Y ² |
|-------------|----------|----------|--------------|-------------------------|-------------------------|
| 2007/08 | 1980 | 28.33 | 56093.4 | 3920400 | 802.58 |
| 2008/09 | 1760 | 26.96 | 47449.6 | 3097600 | 726.84 |
| 2009/10 | 816 | 11.72 | 9563.52 | 665856 | 137.35 |
| 2010/11 | 575 | 16.43 | 9447.25 | 330625 | 269.94 |
| 2011/12 | 653 | 11.52 | 7522.56 | 426409 | 132.71 |
| N=5 | X = 5784 | Y =94.96 | XY =130076.3 | X ² =8440890 | Y ² =2069.42 |

Mean $\bar{X} = 1156.8$

Mean $\bar{Y} = 18.99$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.9376$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.01156$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$= 5.62$$

Annex – IX
Simple Correlation and Regression Analysis between MPS & DPS
Nepal Investment Bank Limited

| Fiscal Year | MPS (X) | DPS (Y) | XY | X ² | Y ² |
|-------------|----------|----------|-----------------|----------------------------|----------------------------|
| 2007/08 | 2,450 | 23.63 | 57893.50 | 6002500 | 558.37 |
| 2008/09 | 1,388 | 7.48 | 10382.24 | 1926544 | 55.95 |
| 2009/10 | 705 | 13.14 | 9263.7 | 497025 | 172.65 |
| 2010/11 | 515 | 19.55 | 10068.25 | 265225 | 382.20 |
| 2011/12 | 511 | 8.28 | 4231.08 | 261121 | 68.55 |
| N=5 | X = 5569 | Y =72.08 | XY =91838.77 | X ² =8952415 | Y ² =1237.72 |

Mean $\bar{X} = 1113.8$

Mean $\bar{Y} = 14.42$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.4945$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.00420$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 9.74$$

Annex – X
Simple Correlation and Regression Analysis between MPS & DPS
Lumbini Bank Limited

| Fiscal Year | MPS (X) | DPS (Y) | XY | X ² | Y ² |
|-------------|----------|---------|------------|------------------------|-----------------------|
| 2007/08 | 631 | 0 | 0 | 398161 | 0 |
| 2008/09 | 435 | 0 | 0 | 189225 | 0 |
| 2009/10 | 303 | 0 | 0 | 91809 | 0 |
| 2010/11 | 221 | 3 | 663 | 48841 | 9 |
| 2011/12 | 213 | 1.62 | 345.06 | 45369 | 2.62 |
| N=5 | X = 1803 | Y =4.62 | XY =1008.6 | X ² =773405 | Y ² =11.62 |

Mean $\bar{X} = 360.6$

Mean $\bar{Y} = 0.924$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= -0.7436$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= -0.00534$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$= 2.85$$

Annex – XI
Simple Correlation and Regression Analysis between MPS & EPS
Nabil Bank Limited

| Fiscal Year | MPS (X) | EPS (Y) | XY | X ² | Y ² |
|-------------|-----------|-----------|--------------|--------------------------|--------------------------|
| 2007/08 | 5275 | 115.86 | 611161.5 | 27825625 | 13423.54 |
| 2008/09 | 4899 | 113.44 | 555742.6 | 24000201 | 12868.63 |
| 2009/10 | 2384 | 83.81 | 199803 | 5683456 | 7024.116 |
| 2010/11 | 1252 | 70.67 | 88478.84 | 1567504 | 4994.249 |
| 2011/12 | 1355 | 83.57 | 113237.4 | 1836025 | 6983.945 |
| N=5 | X = 15165 | Y =467.35 | XY = 1568423 | X ² =60912811 | Y ² =45294.48 |

Mean $\bar{X} = 3033$

Mean $\bar{Y} = 93.47$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.9737$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.01012$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 62.77$$

Annex – XII
Simple Correlation and Regression Analysis between MPS & EPS
Everest Bank Limited

| Fiscal Year | MPS (X) | EPS (Y) | XY | X ² | Y ² |
|-------------|----------|-----------|-------------------|--------------------------|---------------------------|
| 2007/08 | 3122 | 91.82 | 286662.04 | 9746884 | 8430.9124 |
| 2008/09 | 2455 | 99.99 | 245475.45 | 6027025 | 9998.0001 |
| 2009/10 | 1630 | 100.16 | 163260.8 | 2656900 | 10032.0256 |
| 2010/11 | 1094 | 83.18 | 90998.92 | 1196836 | 6918.9124 |
| 2011/12 | 1033 | 88.55 | 91472.15 | 1067089 | 7841.1025 |
| N=5 | X = 9334 | Y =463.70 | XY = 877869.36 | X ² =20694734 | Y ² =43220.953 |

Mean $\bar{X} = 1866.8$

Mean $\bar{Y} = 92.74$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.4588$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

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

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

Solving these two normal equations we get,

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

$$= 0.00374$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$= 85.76$$

Annex – XIII
Simple Correlation and Regression Analysis between MPS & EPS
Himalayan Bank Limited

| Fiscal Year | MPS (X) | EPS (Y) | XY | X ² | Y ² |
|-------------|----------|----------|------------------|-------------------------|----------------------------|
| 2007/08 | 1980 | 62.74 | 124225.20 | 3920400 | 3936.3076 |
| 2008/09 | 1760 | 61.9 | 108944 | 3097600 | 3831.61 |
| 2009/10 | 816 | 31.8 | 25948.8 | 665856 | 1011.24 |
| 2010/11 | 575 | 44.66 | 25679.5 | 330625 | 1994.5156 |
| 2011/12 | 653 | 39.94 | 26080.82 | 426409 | 1595.2036 |
| N=5 | X = 5784 | Y=241.04 | XY= 310878.32 | X ² =8440890 | Y ² =12368.8768 |

Mean $\bar{X} = 1156.8$

Mean $\bar{Y} = 48.20$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.8852$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

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

$$\sum XY = a \sum X + b \sum X^2$$

Solving these two normal equations we get,

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

$$= 0.01831$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 27.03$$

Annex –XIV

Simple Correlation and Regression Analysis between MPS & EPS
Nepal Investment Bank Limited

| Fiscal Year | MPS (X) | EPS (Y) | XY | X ² | Y ² |
|-------------|----------|-----------|------------------|-----------------------------|-------------------------------|
| 2007/08 | 2,450 | 57.87 | 141781.5 | 6002500 | 3348.9369 |
| 2008/09 | 1,388 | 37.42 | 51938.96 | 1926544 | 1400.2564 |
| 2009/10 | 705 | 52.55 | 37047.75 | 497025 | 2761.5025 |
| 2010/11 | 515 | 39.1 | 20136.5 | 265225 | 1528.81 |
| 2011/12 | 511 | 27.6 | 14103.6 | 261121 | 761.76 |
| N=5 | X = 5569 | Y =214.54 | XY= 265008.31 | X ² = 8952415 | Y ² = 9801.2658 |

Mean $\bar{X} = 1113.8$

Mean $\bar{Y} = 42.91$

$$\text{Coefficient of Correlation } r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= 0.6437$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.00948$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$= 32.35$$

Annex – XV
Simple Correlation and Regression Analysis between MPS & EPS
Lumbini Bank Limited

| Fiscal Year | MPS (X) | EPS (Y) | XY | X ² | Y ² |
|-------------|-------------|--------------|---------------|----------------------------|-------------------------------|
| 2007/08 | 631 | 32.91 | 20766.21 | 398161 | 1083.0681 |
| 2008/09 | 435 | 30.31 | 13184.85 | 189225 | 918.6961 |
| 2009/10 | 303 | 23.49 | 7117.47 | 91809 | 551.7801 |
| 2010/11 | 221 | 29.98 | 6625.58 | 48841 | 898.8004 |
| 2011/12 | 213 | 13.53 | 2881.89 | 45369 | 183.0609 |
| N=5 | X = 1803 | Y =130.22 | XY = 50576 | X ² = 773405 | Y ² = 3635.4056 |

Mean $\bar{X} = 360.6$

Mean $\bar{Y} = 26.04$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.6600$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.02936$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 15.46$$

Annex – XVI
Simple Correlation and Regression Analysis between MPS & DPR
Nabil Bank Limited

| Fiscal Year | MPS (X) | DPR (Y) | XY | X ² | Y ² |
|-------------|-----------|---------|----------------|-----------------------------|-----------------------|
| 2007/08 | 5275 | 100 | 527500 | 27825625 | 10000 |
| 2008/09 | 4899 | 85 | 416415 | 24000201 | 7225 |
| 2009/10 | 2384 | 70 | 166880 | 5683456 | 4900 |
| 2010/11 | 1252 | 30 | 37560 | 1567504 | 900 |
| 2011/12 | 1355 | 60 | 81300 | 1836025 | 26625 |
| N=5 | X = 15165 | Y =345 | XY =1229655 | X ² =60912811 | Y ² =26625 |

Mean $\bar{X} = 3033$

Mean $\bar{Y} = 69$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.8936$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.01229$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 31.72$$

Annex – XVII

Simple Correlation and Regression Analysis between MPS & DPR
Everest Bank Limited

| Fiscal Year | MPS (X) | DPR (Y) | XY | X ² | Y ² |
|-------------|----------|---------|------------|-----------------------------|----------------------|
| 2007/08 | 3122 | 30 | 93660 | 9746884 | 900 |
| 2008/09 | 2455 | 30 | 73650 | 6027025 | 900 |
| 2009/10 | 1630 | 30 | 48900 | 2656900 | 900 |
| 2010/11 | 1094 | 10 | 10940 | 1196836 | 100 |
| 2011/12 | 1033 | 30 | 30990 | 1067089 | 900 |
| N=5 | X = 9334 | Y =130 | XY =258140 | X ² =20694734 | Y ² =3700 |

Mean $\bar{X} = 1866.8$

Mean $\bar{Y} = 26$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.4778$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.00473$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 17.17$$

Annex – XVIII

Simple Correlation and Regression Analysis between MPS & DPR
Himalayan Bank Limited

| Fiscal Year | MPS (X) | DPR(Y) | XY | X ² | Y ² |
|-------------|----------|--------------|------------------|----------------------------|------------------------------|
| 2007/08 | 1980 | 45 | 89100 | 3920400 | 2025 |
| 2008/09 | 1760 | 43.56 | 76665.6 | 3097600 | 1897.4736 |
| 2009/10 | 816 | 36.84 | 30061.44 | 665856 | 1357.1856 |
| 2010/11 | 575 | 36.84 | 21183 | 330625 | 1357.1856 |
| 2011/12 | 653 | 28.84 | 18832.52 | 426409 | 831.7456 |
| N=5 | X = 5784 | Y =191.08 | XY =235842.56 | X ² =8440890 | Y ² =7468.5904 |

Mean $\bar{X} = 1156.8$

Mean $\bar{Y} = 38.22$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= 0.8677$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= 0.00846$$

$$a = \frac{\sum XY - b \sum X^2}{\sum X}$$

$$= 28.43$$

Annex –XIX

Simple Correlation and Regression Analysis between MPS & DPR
Nepal Investment Bank Limited

| Fiscal Year | MPS (X) | DPR (Y) | XY | X ² | Y ² |
|-------------|----------|-----------|-----------------|----------------------------|------------------------------|
| 2007/08 | 2,450 | 40.83 | 100033.5 | 6002500 | 1667.0889 |
| 2008/09 | 1,388 | 20 | 27760 | 1926544 | 400 |
| 2009/10 | 705 | 25 | 17625 | 497025 | 625 |
| 2010/11 | 515 | 50 | 25750 | 265225 | 2500 |
| 2011/12 | 511 | 30 | 15330 | 261121 | 900 |
| N=5 | X = 5569 | Y =165.83 | XY =186498.5 | X ² =8952415 | Y ² =6092.0889 |

Mean $\bar{X} = 1113.8$

Mean $\bar{Y} = 33.17$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

= 0.0445

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

= 0.00065

$$a = \frac{\sum XY - b \sum X^2}{X}$$

=32.44

Annex – XX

Simple Correlation and Regression Analysis between MPS & DPR
Lumbini Bank Limited

| Fiscal Year | MPS (X) | DPR (Y) | XY | X ² | Y ² |
|-------------|----------|---------|----------|------------------------|---------------------|
| 2007/08 | 631 | 0 | 0 | 398161 | 0 |
| 2008/09 | 435 | 0 | 0 | 189225 | 0 |
| 2009/10 | 303 | 0 | 0 | 91809 | 0 |
| 2010/11 | 221 | 10 | 2210 | 48841 | 100 |
| 2011/12 | 213 | 12 | 2556 | 45369 | 144 |
| N=5 | X = 1803 | Y =22 | XY =4766 | X ² =773405 | Y ² =244 |

Mean $\bar{X} = 360.6$

Mean $\bar{Y} = 4.4$

$$\text{Coefficient of Correlation } r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$= -0.7436$$

Regression Equation of Y on X is

$$Y = a + bx$$

Where,

A = Regression Constant

B= Regression coefficient (slope of the regression line)

According to the principle of least squares two normal equation for estimating two numerical constant a & b are given by

$$Y = na + b X$$

$$XY = a X + b X^2$$

Solving these two normal equations we get,

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

$$= -0.02570$$

$$a = \frac{\sum XY - b \sum X^2}{X}$$

$$=13.67$$