

# **FINANCIAL PERFORMANCE INDICATOR AND SHARE PRICE MOVEMENT**

**A THESIS**

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## **RECOMMENDATION**

This is to certify that the Thesis

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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the **Degree of Master’s in Business Studies (M.B.S.)**

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## **DECLARATION**

I hereby declare that the work reported in this thesis entitled **Financial Performance Indicator And Share Price Movement** submitted to Shaker Dev Campus, Faculty of Management, Tribhuvan University, is my original work done for the partial fulfillment of the requirement of the degree of Master of Business Studies (MBS) under the supervision of Prof. Snehlata Kafle and Mr. Pitri Raj Adhikari of Shanker Dev Campus.

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## LIST OF ABBREVIATION

A.D.	:	Anno Domini
ABBS	:	Any Branch Banking System
Adv	:	Advances
AM	:	Arithmetic Mean
ASEAN	:	Association for South East Asian Nation
ATM	:	Automatic Teller Machine
B.S.	:	Bikram Sambat
BP	:	Bills Purchase
C.V.	:	Coefficient of Variation
DPS	:	Dividend per Share
D/P	:	Dividend payout Ratio
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
FY	:	Fiscal Year
HBL	:	Himalayan Bank Limited
IRR	:	Internal Rate of Return
JVB	:	Joint Venture Bank
M.B.S	:	Master of Business Studies
MPS	:	Market price per share
NWPS	:	Net worth per Share
NEPSE	:	Nepal Stock Exchange Limited
NRB	:	Nepal Rastra Bank
ROE	:	Return on Equity
S.D.	:	Standard Deviation
T.U	:	Tribhuvan University
USA	:	United States of America
www	:	World Wide Web

# CHAPTER-1

## INTRODUCTION

### 1.1 Background of the study

Nepal stock Exchange, in short NEPSE, is non-profit organization, operating under securities Exchange Act, 1993. NEPSE, opened its trading floor on 13<sup>th</sup> January 1994. Member of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 2 member brokers and market makers, who operate on the trading floor as per the securities Exchange Act, 1983, rules and byelaws. ([www.nepalstock.com](http://www.nepalstock.com))

At present Nepal have so many banks and insurance companies performing different tasks. It shows there is perfect competition between these institutions. In some cases both insurance companies and commercial banks work mutually. Commercial banks are more effectively working than insurance companies. It is because, the banks have highly skilled personnel, modern banking services, management skills quick and prompt services, international network and country suited services. However, two big banks namely, Nepal Bank Ltd. And Rastriya Banijya Bank are going to be run by contracted management, which shows still Nepalese commercial Banks have some practical problem and limitations.

Besides these all, banks are performing various functions such as money creation and generation, deposit collection, credit extension, credit card issue and cheque transaction, import letter of credit, traveler cheque, export bill, issue of draft, telex transfer and safe keeping of value. Insurance companies on the other hand, playing dual role in the economy, safeguard the insurance against the risk of the loss of the life and property and intermediate scarce of resources.

If a company has surplus cash, it can buy back outstanding number of share, which is known as repurchase of shares. In the developed capital market, corporations are allowed to buy shares back for better utilization of their unused cash. However,

Nepalese company acts 1997, section 47 has prohibited company from purchasing its own share, it states that no company shall purchase its own shares and supply loans against the security of its own shares. (Adhikari, 1999 P: 9)

The main focus of investors however is the dividend. But there is not any consistency and regular practice of dividend announcement in different firms. They are exactly as a per their dividend policies. Similarly in the secondary market the declaration of the dividend or the dividend policy of the firm change the market prices of the shares. Therefore it is expected that there is some impact of dividend policy over the market price of the stock.

#### Dividend policy & Market price of Stock (MPS)

Once a company makes a profit, they must decide on what to do those profits. They could continue to retain the profits within the company or they could pay out the profits to the owners of the firm in the form odd dividends. Once the company decides on whether to pay dividend, they may establish a somewhat permanent dividend policy, which may in turn impact on investors and perceptions of the company in the financial market. What they decide depends on the preferences of investors and investors.

Dividend in the simple term is part of earnings, which is announces to distribute between the stockholders. In one way it is the cost of sacrificing hard money but as an investment. But unfortunately, some company pay whole earning as dividend and some company do not some company retains more and pays less as dividend.

In practice, company pays whole earnings as dividend at the beginning to create better image and existence in the financial market but later they may change their policy and announce a certain percentage of dividend payout term. The decision to keep some portion of earning or pay some portion of earning as dividend is known as dividend policy. (Khadiwada, 2001 p: 41)

The dividend payout ratio may be different but the common dividend payout ratio (D/P ratio) is 40% as different studies reveal. Keeping, all these things into consideration, it could be said that, the actual owner dividend. Moreover in some companies dividend is not announced. But recently the trends of the dividend payment are increasing.

The present scenario of the world's capital market is more dependent in capital appreciation base. But for capital appreciation improvement, some sorts of dividend of policy are practiced or adopted by a firm, is vital. In the Nepalese context, dividend policy is less balanced. Theoretical and practical deviation has proved, everything as written is not practiced and everything practiced is not of actual theory. Therefore dividend policy is the practice, strategy or decision made by a firm as per their requirements to establish market reputation as well as to meet general expectations of the shareholders. The payment of the corporate dividend is at the discretions of the Board of Directors. Most corporations pay dividend quarterly. Dividend may be paid in cash, stock merchandise.

Cash dividend is the most common, merchandise dividend are at least common. Stockholders are not promised a dividend, but he /she grows to expect certain payment on historical dividend pattern of the firm. Before dividend are paid to common stockholders the claims of creditors, the government and preferred stockholders must be satisfied. (Gitman, 1988 P: 609)

Market price of the stock is the trading price of the stock listed in authorized or legal stock exchanges. In context of Nepal, MPS is the is coated for purchasing or selling under Nepal Stock Exchange Act or related laws and regulations, on the stock exchange floor. MPS is that value of stock, which can be obtained by a firm from the market. Market value of a share is one of the variables, which is affected by the dividend per share earnings per share of the firm. If the earning per share and dividend per share is high or low than the book values. If the firm is growing concern and it's earning power is greater than the book values. If the firm is growing concern and it's earning power is greater than cost of capital, the market value of the share

will be higher than the book value. If the firm's earning capacity is lower than the cost capital MPS will also be lower. MPS determined by capital market.

Market price of the stock usually fluctuates by the adequate information. NO one can earn more in the inefficiency and inefficiency is legally prohibited in order to regulate the Security market in every nation. But being focused in this study, dividend policy and its impact on market price of stock, there should be discussed different models and practices which have significant effects in MPS or not . So MPS and security price there is no chance of trading. Every day in newspaper one can see the market price of the different shares from different companies. The trading of the share definitely requires the MPS, which can be obtained by the stock valuation. Share valuation in an economic progress generates rational securities prices. Although the price fluctuation may appear to be chaotic, they are random fluctuations that result from the random arrival of the new information.(Clark 1990 p: 207)

Dividend policy and MPS has correlation; if the company pays high dividend the MPS increases and vice-versa. But in some cases out of this interrelation, the price may remain constant or decrease too. Therefore, the information lack or flow is vital in the analysis of MPS.

## **1.2 Focus of the Study**

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

### **1.3 Statement of Problems**

Dividend policy itself is not well-known subject or practice by larger numbers of financial community even today. From the past many years it has been tried to see the relevant and practicable dividend policy in the firms all over the world. In context of Nepal, firms have followed some kinds of dividend policy is not course, with an adhoc trend. That is the reason; it can be said that dividend policy is not matching with the earnings made by the firms. But at the same time, it is the truths that many scholars have not been able to define some experts believe to have positive relationship but other believes no relation at all. The capital market of Nepal is just in the way to development, yet investors are investing in new companies without having the perspective analysis of those companies. In popular practice of Nepal, when the firm earns big earnings they retain more and when they do not have good figure of earnings, company announces high dividend to protect their image in the capital market. Studying the dividend trend of Himalayan Bank it can be proved as this bank had paid Rs35 in the year 1995/96 when the EPS was Rs103.43 but in the year 1997/98.

It had paid Rs 110 as dividend; it is because the bank wanted to increase the perception value to protect the image in the capital market. Many researches have been made earlier in this concern. However, no other studies have been made to see the impact of dividend policy on the market price of the stock including the actual scenario of Nepalese capital Market. Moreover, research question is to find out what sorts of limitation or gap have made a culture of stock price change. Therefore the main focus of this study is to deal with the following problems so far it will be possible to cope with:

- What is the impact of dividend policy on the market price of the stock?
- Is there any uniformity between the firms in regards to financial indicators and variables?
- What is the reason behind stock price increasing after the announcement of dividend and are there any gaps, which have to be remarked?



## **1.4 Objective of the Study**

1. To examine the prevailing practices and effort made in dividend policy among the firms.
2. To explore impact of dividend policy on market price of stock.
3. To analyze the uniformity among DPS, MPS and DPR.

## **1.5 Significance of the study**

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

- The study helps to the management and policy maker in setting and making a suitable dividend policy.
- The dividend policy of the the banking and insurance sector plays viatal role for socio- economic development in the nation, that is way the study of dividend policy of these sector is needed so far as possible.
- To raise public awareness about dividend policy and market price of share relation in order to help them for rational decision of their investment.

## **1.6 Limitation of the study**

The following points are as follows:

- Most of the data used in the study are of secondary nature, therefore there might be reporting errors.
- All the data are based in fiscal year 2001/2002 to 2008/09 for commercial Banks.
- Among the different aspects of dividend policy only the market price of the stock been selected & only cash dividend is taken for the analysis.
- Due to annual distribution system in Nepal dividend has not been considered for calculation of holding monthly period return.

- The data being taken from secondary source the authentic of the data is dependent on the accuracy of the website used.

## **1.7 Organization of the Study**

This study has been organized into five chapters:

**Chapter1:** Introduction-This chapter deals with subject matters of the study consisting background of the study focus of the study, statement of the problem, objective of the study and significance of the study.

**Chapter 2:** Review of Literature This chapter deals with review of the different literature of the study field. Therefore it includes conceptual framework along with the review of major books, journals, research works and thesis etc.

**Chapter 3:** Research Methodology This chapter deals with research methodology and it includes research design, population and sample, source and technique of data collection, data analysis tools and limitation of the methodology.

**Chapter 4:** Data presentation & Analysis- This chapter deals with analysis and interpretation of the data using financial and statistical tools described in chapter three. Similarly this chapter also includes the major finding of the study.

**Chapter 5:** Summary, Conclusion and Recommendations- This chapter deals with summary of the study held, the conclusion made ultimately and the possible suggestions. The bibliography and appendices are incorporated in the end of the study.

## **CHAPTER – II**

### **REVIEW OF LITERATURE**

#### **Introduction**

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

#### **2.1 Conceptual Framework**

##### **2.1.1 Commercial Banks**

A bank is a financial institution that trade money. It accepts deposit from the public as fixed deposit, current account deposit and saving account deposit. The bank gives money in the form of loans and advances to the needy persons. It provides to customers a cheap medium of exchange like cheques. It gives the facilities transfer of funds, collecting customer's funds, purchase of shares, collecting dividend and purchase and sell foreign exchange etc.

A bank is an establishment, which makes to individuals such advances of money as may be required and safety made and to which individuals in truth money which not required by them for use. A banker is one who in the ordinary course of his business receives money, which he repays by honoring cheques of persons from whom or on whose account he receives it. Therefore a commercial bank is a financial institution that accepts the demand and time deposit from the business, institution and individuals and engaged in both business and consumer lendings. It uses funds raised from the public deposits providing loans to different sectors with the prime objectives of profit maximization. Moreover, commercial bank provides technical and administrative assistances to industries, trade businesspersons. Commercial banks are among the base pillar of economic development of any nation. Especially in the

developed countries, the operations of commercial banks record the economic pulses of the economy.

The size and composition of commercial bank's transactions mirror the economic happening in the country. For example, the mass failure of commercial banks during the 1930's reflected the phenomenon serve global depression in the world. Commercial banks have played the vital role in giving a direction financing the requirements of trade and industry in the country.

Commercial bank not only generates the small savings from the nook and corner of the country, it in the border sense, help to promote secondary as well as primary security markets. Initial public offering (IPO), underwriting and security collateral loans are the examples. Similarly, it draws the community savings into the organized sectors, which can then be allocated among the different economic activities according to the priorities laid down by the planning authorities in the nation.

Basically in the planned economy, commercial bank not only provides economic resource but also provides and assists with technical know-how. They in other hands also do not discriminate the investment areas and organization whether the organization is public, joint venture, private sector or government. All these sectors are equally subsumed into the production plans which bank finance.

Not only in the highly developed industrial an non-industrial economics of the world where in a way the commercial and industrial activities are paralyzed in the absence of banks keeping their doors open , even in the developing countries most economic activities, particularly in the economy's organized sector, are bank based.( Sinkey, 1988 12-14)

The history of banking sector in our country is not of far time interval. With an establishment of Nepal Bank Ltd, in 1937, the commercial banks history was opened. At that time 51% government and 49% by public held equity in general. After then, Rastriya Banijya Bank came in existence in 1966 as the second commercial bank but with 100% government ownership. After 1980, many foreign joint venture banks

were introduced in Nepal. It could be, only when the government applied the financial liberalization policy. Many of new banks to registered to open even today.

### **2.1.2 Earnings**

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

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

### **Forms of Earnings**

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

- Accounting earnings
- Economic earnings

### **2.1.3 Dividend**

Dividend is the periodic payment made to stockholders to compensate them for their wealth and investment funds. Dividends are pro-rata distributions to shareholders retained earnings. They can be in the form of cash, stock or property. Generally, corporation can only declare dividends out of earnings, although some states laws and corporate agreements permit to declaration of dividends from sources other than earnings. (Hawkins, 1997: 650)

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

- Residual theory
- Wealth maximization theory

### **(i) Residual Theory**

Residual theory is that, in which the first priority is given to the profitable investment opportunities. If there are profitable opportunities, the firm invests in those and residual income (if any) is distributed to the stockholders. Residual theory of dividends means, “A theory that suggests that the dividend paid by the firm should be the amount left over after all acceptable investment opportunities have been undertaken.”(Gitman, 1988: 616) Using this approach the firm would treat the dividend decision in three steps as follows:

#### **Step 1**

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

#### **Step 2**

Using the optimal capital structure proportion, it would estimates the total amount of equity financing needed to support the expenditures generated in step 1,

#### **Step 3**

Because the cost of retained earnings,  $K_r$ , is less than the cost of new common stocks,  $K_N$ , retained earnings would be used to meet the equity requirement determined in step 2. If retained earnings are inadequate to meet these needs, new common stock

would be sold. If the available retain earnings are in excess to this needs, the surplus amount would be distributed as dividends.

### **(ii) Wealth Maximization Theory**

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

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

#### **2.1.3.1 Cash Dividend**

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

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

Cash dividend has the psychological value for stockholders. Each and everyone like to collect their return in cash rather than non-cash means. So cash dividend is not only

a way to earnings distributions but also a way of perception improvement in the capital market. The objectives of the cash dividend are:

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

### **2.1.3.2 Stock Dividend & Stock Split**

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

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

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

The payment of stock dividend does not change earning neither position of the form nor ownership of the stockholders is changed. A stock dividend is paid in additional shares of the stock instead of in cash and simply involves a book keeping transfer from retain earning to stock accounts. (Weston, 1991: 680)

The net effect of the stock dividend would be an increase in numbers of shares of current stockholders to represent the same interest as it was before using the stock dividend. Practically, if the stock dividend is issued, the par value of the share remains constant. In case of stock split the par value of the share does not remain constant, therefore the common stock, paid-in-capital and retain earnings account also remain same. Except in accounting treatment the stock dividend and stock split are very similar. A stock split however is usually reversed for occasion when a company



wishes to achieve a substantial reduction in the market price of the shares. (Van Horne: 328)

In any case, the concern of the management is the positive effect on the stock price. The stock dividend must not be issued if it caused the stock price decline. The effect of the stock dividend can be outline into the following points:

- ✓ The issuer of the stock dividend increases the numbers of the outstanding shares.
- ✓ The issue of stock dividend transfers retained earnings to the capital account.
- ✓ The net worth and the par value of the company do not change with the issue of stock dividend.
- ✓ The issue of the stock dividend does not affect the stock holders' proportional ownership,
- ✓ The earnings per share (EPS) will decrease if the total profit does not increase.

An analysis of all benefits and cost of stock dividends depicts the net effect on the value of stock, and provides a basis to issue or not to issue stock dividend. (Pradhan, 1992: 384) In stock split there is no change in the capital account: instead a large numbers of the shares of the common stock are issued. In two-for-one stock split, stockholders receive two shares for each one previously held. The book value per share is cut in a half and par or stated, value per share is similarly changed. (Prasad: 14) Practically accepted behavior of the stock dividend and split hold some differences. The New York Stock Exchange consider, any distribution of the stock totaling than 25% of outstanding stock to be a stock dividend and any distribution of 25% or more a stock split. A stock split has the following effects:

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

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

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

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

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

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

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

It may be emphasized that the market value of share may improve as the result of bonus issue if it is followed by increased dividends in the immediate future. If the dividends do not increase, it is likely that the market price may fall. (Gupta, 1973: 7)

### **2.1.3.3 Scrip Dividend**

Scrip dividend means payment of dividend in scrip or promissory notes. Because of temporary cash shortage, sometimes the firm needs cash generated by business earnings to meet the different requirements. For those requisites, scrip dividend is issued promising the payment will be made in future.

- This type of dividend does not change the total numbers of the stock but issued promissory note in the proportion of share held by the stockholders.
- Scrip dividend has relatively low psychological value in the stockholders' perception than other forms of the dividends

### **2.1.3.4 Property Dividend**

If the company pays the dividend in the forms of assets to its stockholders other than the cash is known as property dividend. In this practice, assets, which are superfluous for the company, are distributed as dividend to the stockholders, and in some cases the company pays (as dividend) the subsidiary company's shares. But the shares have to be owned by the company. Property dividends are also least used practice and used when extra-ordinary circumstances exist. Property dividend may have the following natures:

- It should match the requirements of the shareholders or it reduces the charming of cash dividend replacement,
- Perception value of property dividend cannot be as same as cash dividend
- Property dividend is very least applied means to dividend; therefore sometimes it may have (not need) positive response of the investors.

Even though this type of dividend is paid in the extra-ordinary situation, it is less attractive in the point of view of the investors in any cases. Similarly the payment of the subsidiary company's shares in place of cash dividend could result the negative impact of 'this is not better than that'. The shareholder may feel the shares that are paid to them are of less value therefore they paid.

### **2.1.3.5 Bond Dividend**

With the theory and concept of scrip dividend, if dividends are paid in the form of bond (to shareholders), promising that it will nature in the future date is known as bond dividend. Therefore the intention and purpose of bond dividend is also the postponement of dividend payment for some time. The only difference between bond and scrip dividend is that bond carries relatively longer maturity date than scrip dividend.

Bonds used to pay carry interest and it means that the company assumes the fixed obligation of interest payment annually and principal amount of bond at maturity date. Bond dividend posses the following characteristics:

- Bond dividends are the means to dividend postponement for a while but more it is obligation.
- It couldn't bring back the psychological value as the cash dividend,
- Bond and scrip dividend are same, only the difference between these are maturity time i.e. scrip has relatively less maturity time than bond dividend.

### **2.1.3.6 Split and Reverse Split**

Stock split as already mentioned would be the adjustable cash dividend replacement. It helps to satisfy the following three reasons:

- To make the share more attractive stock split may be practices by the company,
- Stock split would increase the transaction value of share,
- Stock split is itself the indication of higher profit in future.

When the market price of share of a company is falling gradually, the company may adopt reverse split which may increase the market price per share and help to maintain efficient situation of the company. The reduction of the numbers of outstanding shares by increasing per share value is known as a reverse split.

### **2.1.3.7 Stock Repurchase**

It is the process of repurchasing back outstanding shares of any company. A corporation's repurchase of its stock can serve as a tax advantages substitute for dividend payout. Repurchases have the effect of raising share prices so that shareholders can be taxed at the capital gain rate instead of ordinary dividend rate on cash dividend. Company can repurchase its shares in two ways:

- Open Market Repurchase
- Tender (Offer) Repurchase

Open market repurchases usually (but not always) involve gradual programs to buy back shares over a period of time. In tender offer, the company usually specifies the number of shares it is offering to repurchase, a tender price, and a period of time during which the offer is in effect. If the number of shares actually tendered by the shareholders exceeds the maximum number specified by the company, the purchases are usually made on a pro-rata basis. Alternatively, if the tender offer is under subscribed the firm may decide to cancel the offer or extend the expiration date. Share tendered during the extension may be purchased on either pro-rata or FCFS (First Come First Served) basis (Weston: 682-683).

The repurchase of stock holds major three reasons i.e. for stock option, for acquisition, and for retiring the stocks. However, Nepalese company acts 1997, section 47 has prohibited company for repurchasing its own shares. It states that no company shall purchase its own shares or supply loans against the security of its own shares Stock is repurchased especially when the firm has abnormally high profits and is not in a position to effectively utilize surpluses. By repurchasing stocks, the remaining stockholders receive future benefits instead of current high dividend. The point to be noted whether the benefits of repurchase out weights the portion of profits

the remaining stockholders are to give up for repurchasing stocks. The repurchase effects are as follows:

- i. The stock repurchases reduce the number of outstanding stocks.
- ii. It increases EPS and also DPS if the payout ratio is not changed.
- iii. It increases the proportional ownership of existing stockholders.
- iv. It increases the stock price as net worth per share increases.

#### **2.1.4 Dividend Policy**

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

The third major decision of the firm is its dividend policy, the percentage of earnings it pays in cash to its stockholders. Dividend payout, of course, reduces the amount of earnings retain in the firm and affect the total amount of internal financing. The dividend payout ratio obviously depends on the way earnings are measured for ease of explosion, we use account net earnings but assume that these earnings can form true economic earnings. In practice, net earnings may not conform and may not be an appropriate major of the ability of firm to pay dividends. (Van Horne, 2000: 305)

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

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

- Amount of dividend to be paid-the policy outlines the basis to determine the amount of dividend to be paid,
- Form of dividend- Cash dividend and / or stock dividend,
- Payment procedure
- Stock repurchase and stock splits (Pradhan,1992 P:376)

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

#### **2.1.4.1 Stable Dividend Policy**

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

##### **a) Stable Dividend per Share**

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

##### **b) Stable Payout Ratio**

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

##### **c) Low Regular plus Extra Policy**

If the company usually pays dividend constantly to stockholders at a fixed rate and do not change the payout ratio unless it is believed that the changes in earnings are permanent. When the earning of a firm is swelling, it may have decided to distribute a part of increased earnings as extra dividend. It is known earnings exceed annual dividend requirement by some given amount and it will be skipped subsequently,

when business earning will drop to normal level. It could be the better policy to that company whose stockholders prefer at least a certain amount of regular income or return.

#### **2.1.4.2 No Immediate Dividend Policy**

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

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

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

#### **2.1.4.3 Regular Stock Dividend Policy**

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

- When the firm needs cash generated by earnings to cover its modernization and expansion project,
- When the firm is deficient in cash despite high earnings, this is particularly true when the firm's sale is affected through credit and entire sales proceeds are tied in receivables.

#### **2.1.4.4 Irregular Pay Dividend Policy**

It is the policy in which, the firm does not pay any fixed amount of dividend every year or dividend varied in correspondence with change in level of earnings, i.e., higher earnings means higher dividend and vice-versa.



The firm with un-stable earnings also adopts this policy, when there are investable opportunities the company retains more and when there are not any investable opportunities, the company distributes the earnings as dividend or there is not regularly of dividend payment therefore it is the most used type of dividend policy in the Nepalese context at present.

### **2.1.5 Factors Affecting Dividend Policy**

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

In fact earning and dividend has positive correlation (most of the times) therefore when earnings increase the dividend is also become so and vice-versa. But the challenge of the financial managers is to bring balance between company's fund requirement (need) and stockholders expectations (desires). There are many practical factors, which are vital in dividend decisions. To maintain the balance between both, company's need as well as investors' expectation, the following matters and circumstances are to be considered:

#### **i) Shareholders' Expectations**

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

#### **ii) Closely Held Companies**

In case of closely held companies, the body of shareholders is small and homogeneous and management usually knows the expectations of the shareholders. Therefore they can easily adopt a dividend policy, which satisfies most shareholders. If most of the shareholders are in high tax bracket and have the preference for capital

gains to current dividend income, the company can establish a dividend policy of paying less or no dividend and retaining the earnings within the company.

### **iii) Widely Held Company**

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

#### **a) Small Shareholders**

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

#### **b) Retired and Old Person**

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

#### **c) Wealthy Investors**

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

#### **d) Institutional Investors**

Such investor purchases the large blocks to hold them for relatively long periods of time. Institutional investor, unlike wealthy shareholders, are not concerned with personal income tax but with profitable investment. Most institutional investor avoids speculative issues, seek diversification in their investment portfolio and favor a policy a regular cash dividend payment.

#### **iv) Financial Need of the Company**

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

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

#### **v) Dividend Paying Constraints**

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

#### **Legal Provision**

Dividend declaration is not only the concern of shareholders and company, but it is also the issue of the government regulation. Therefore the government may put some

criteria to the company for the announcement of the dividend. So the company must consider the provision made either in company act or by government.

### **Liquidity**

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

### **Ability to Borrow**

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

### **Access to the Capital Market**

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

### **Restriction in Loan Agreement**

Lender may generally put restriction on dividend payment to protect their interest when the firm is experiencing low liquidity or low profitability. As such the firm

agrees as a part of a contract with a lender to restrict the dividend payment. Therefore when the restriction of this type is put, the company is forced to retain the earning and have low payout ratio. The newcomer firms and the firm having low liquidity and inefficient funds basically apply it.

### **Control**

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

### **Taxes**

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

### **Investment Opportunities**

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

- If the firm typically has large numbers of profitable investment opportunities, this will tend to produce a low target payout ratio and vice-versa.
- The ability to accelerate or to postpone projects will permit a firm to adhere more closely suitable dividend policy.

### **Inflation**

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

### **Difference in the Cost of External Equity or Retain Earning**

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

- Issuing cost
- Earnings

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

### **Dividend stability**

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

## **2.2 Review of Related Studies**

### **2.2.1 Review of Major International Studies**

As we mentioned earlier, there have been so many studies made by the different persons and institutions for dividend policy and stock price. There are two opinions regarding to dividend payout and market price/value of the shares.

One point of view is that dividends are irrelevant and the amount of dividend payout does not affect the market value of the share. The other is dividends are relevant and the amount of dividend paid affect the market price/value of the shares.

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

#### **Modigliani and Miller's Study (Van Horne, 2000: 306-309)**

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

M-M approach is based on the following assumptions:

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

- ✓ An absence of floatation costs on securities issued by the firms,
- ✓ A world of no taxes,
- ✓ A given investment policy for the firm , no subject to changed,
- ✓ Perfect certainty by every investor as to future investment and profits of the firm (but M-M dropped this assumption later)

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

**Market value/price of share:**

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

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

Where,

$P_0$  = market price at the beginning (Zero period)

$K_e$  = cost of equity capital (assumed constant)

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

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

No external financing

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

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

Where,

$n$  = numbers of equity shares at zero periods.

New Shares



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

$$nP_o = nd_1 + P_1(n+m) - mP_1 / 1 + K_e \dots \dots \dots (iii)$$

Where,

n= no. of share at the beginning

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

**Total number of Shares**

The issuing of new stock is determined by the amount of investment in period 1 not financed by retained earnings. The total numbers of new shares can be found out by the following way:

$$mP_1 = I - (E - nd_1) \dots \dots \dots (iv)$$

Where:

$mP_1$  = the amount collected by issuing new shares

m = the number of shares

$P_1$  = price of shares

I = total new investment requirement

E = earning of the firm during the period

$nd_1$  = total dividend paid

$E - nd_1$  = retain earning

**Conclusion**

By substituting the value of  $mP_1$  from equation (IV) to the equation (III), we find:

$$\begin{aligned} nP_o &= nd_1 + P_1(m+n) - I + E - nd_1 / 1 + K_e \\ &= P_1(m+n) - I + E / 1 + K_e \end{aligned}$$

In such a way, M-M approach concludes its result, that there is no any role of dividend (d1) in the above equation. So, Modigliani and Miller conclude that dividend policy is irrelevant and dividend policy has no effect on the shares price.

### **Walter's Study (Walter, 1996: 29-41)**

The relevant theory of dividend argues that the dividend policy of the firm affects the value of the shares. So, the dividend is relevant. In those cases where firm announced an increase in their dividend, there is a significant positive reaction in their stock prices. Conversely, in those cases when the firm announced the decrease in their dividend, there is the significant negative reaction in their stock prices.

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

- The return on the firm's investment ( R ) and the cost of capital ( $K_e$ ) are constant,
- All earnings are either distributed as dividend or re-invested internally,
- The value of the EPS and DPS remain unchanged,
- The firm has an infinite life.

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

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

Where,

P = market price of an equity share

D = DPS

E = EPS

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

$K_e$  = market capitalization rate or cost of capital

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

**Condition 1 ( $R > K$ )**

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

**Condition 2 ( $R < K$ )**

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

**Condition 3 ( $R = K$ )**

If the internal rate of return equals to the cost of capital, the dividend payout does not affect the market value of the share. In this condition the market value of the share remains constant for the entire dividend payout ratio (even from zero to hundred). This kind of firm is called normal firm. Therefore, there is no any optimum dividend policy for such firm.

**Conclusion**

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

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

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

### **Gordon's Study (Gordon, 1962: 76)**

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

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

- The firm is all equity firm and there is no leverage in its capitalization,
- There is no outside financing and corporate goal is expected to derive from retain earnings,
- iii)The internal rate of return, ( R ) of the firms remain constant,
- The cost of capital (K) for the firm remain constant,
- Corporate tax does not exist,
- Retention ratio (b) once decided will remain constant,
- The cost of capital for the firm is greater than the growth rate i.e.  $K_e > G$ .

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

The firm is all equity firms and there is no leverage in its capitalization

- ✓ There is no financing and corporate goal is expected to derive from retain earnings
- ✓ The internal rate of return, ( R ) of the firms remain constant
- ✓ iii)The cost of capital ( K ) for the firm remain constant
- ✓ Corporate tax does not exist
- ✓ Retention ratio ( b ) once decided will remain constant

- ✓ The cost of capital for the firm is greater than the growth i.e.  $K_e > G$ .

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

$$P = \frac{E(I-b)}{K_e - b*r}$$

Where:

P = market value per share

E = earnings per share

b = retention ratio or % of retain earnings

(I-b) = dividend payout ratio

$K_e$  = cost of capital

$b*r$  = g or growth rate in r

$E(I-b)$  = dividend per share

#### **In Conclusion:**

- Investors give more value to the current dividend than the future capital gain,
- Investors pose these views because they do not want to bear the future uncertainty rather than enjoying the current earnings (dividend)
- Payment of more dividends increases the market value of the share (i.e. investors find more dividend yield.)

#### **Joseph & Itzhok's study (P: 1-11)**

These two people had focused on two devices, which are used widely in the firms. The manager poses inside information about their firm's future prospects and for that purpose various signaling devices are used and information conveyed to the public.

As mentioned above, the two devices are:

- i. Earnings
- ii. Dividends

The information content of dividend hypothesis asserts that managers use each cash dividend announcement to the signal changes in their expectations about future

prospects of the firm. The concentration about information broadly emphasized on the hypothesis that, since dividend decisions are almost solely at management's discretion, announcement of dividend changes should provide less ambiguous information signal than earnings numbers, if dividend convey useful information to the public, the same effect can be seen in stock prices which are changed after public announcement. The main focus of this study is to ascertain whether dividend changes provide information beyond that already provided by quarterly earning numbers. These two people believe, dividend and earnings have signal effect in the practice and thinking of people with regards to the future prospects of the firm.

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

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

384-increased

47- Decreases

2968- Case of no change in dividend

#### **Panel A**

- This includes those companies, which announce dividend with no changes
- Stockholders of such companies earned on average
- The cumulative effect of the abnormal returns during this period is of small magnitudes
- The average return do not defer significantly from zero

These results are similar whether earnings announcement precede or follow dividend announcement.

#### **Panel B**

- Shareholder of the companies that announced increases realized on average
- Positive abnormal returns over the 20 days surrounding announcement dates

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

Moreover, they are of similar magnitude for both groups whether earnings announcement precede or follow dividend announcement. Therefore, one noticeable result is that abnormal returns for the decreases occurred during the day A.D.-1 and A.D. and they are of similar magnitude for both groups. The capital market reaction to dividend announcement like this, support the information content of dividend hypothesis, namely that changes in quarterly cash dividends do provide information about changes in managements' assessment of future prospects of the firm. The study also focuses or emphasizes the quarterly dividend announcement contain useful information beyond that already provided by quarterly earning numbers. Both writers believe that ever earning announcement also affect the market price of the share. For this purpose, stock prices just before and after announcement were taken to analyze.

In the same way, our practice is also none other than "Announcement of increase in earnings causes increase in market price of the share and vice-versa."

#### **Watt's Study (Watts, 1976: 81-85)**

Ross Watt's study of an annual dividend model is somehow disagreed by Michael Laub. He disagrees with Watt's specification of an annual dividend model instead of a quarterly dividend model and with his conclusion that information contents of dividend are trivial.

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

### **Ross Watt's Interpretation**

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

- The accountants tend to base their accounting procedures for the calculation of the earnings on 1- year periods.
- The quarterly earnings often include in their calculations simple extrapolation of many of the preceding year's expenses.
- As a consequence, an expectation of future annual earnings based on quarterly earnings may/will be less efficient than such an expectation base on annual earnings which that extrapolation is absent.

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

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

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

### **Lamont's Study (Lamont, 1998: 1563-1587)**

The study shows that the aggregate dividend payout ratio forecast excess return on both stocks and corporate bonds. It is to mean, high dividends forecast high return and high earnings forecast low return. The correlation of earnings with business conditions gives them predicted power of returns; they contained information about



future returns that is not captured by other variables. Dividend and earnings contribute explanation power at short horizon but however for long horizon stock price matters. These are two reasons, why the payout ratio forecast return i.e.

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

### **Conclusion of the study**

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

- i. Dividend contains information about future returns because they help measure the value of future dividends while earnings contain information because they are corrected business conditions.
- ii. Both high current prices and high current earnings forecast low future returns
- iii. Using earnings yield alone to forecast return are a bad idea
- iv. High dividends forecast high future returns so using dividend yield alone to forecast return are more successful
- v. Dividend price by any smooth accounting variable capturing normal growth produces roughly the same forecasting variables.

### **2.3 Review of Major National Studies**

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

#### **Timilsena's Study (Timilsena, 1997: 1-80)**

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

The major findings of the study were as follows:

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

### **K.C.'s Study (P: 17-95)**

The thesis paper “Dividend policy of joint venture bank in Nepal” of K.C. that had covered the period of 1984/85 to 1989/90 with the following objectives:

- To provide conceptual framework of dividend models
- To analyze the financial variables affecting the stock value and interpret the dividend paying implication under dividend valuation model and
- To provide suggestions, which will give vision for determination and espousal of dividend policy of joint venture banks

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

- The earnings per share of all joint venture banks were raised satisfactorily
- There was correlation between EPS and BPS
- Amount of cash dividend had been raising each year
- The P/E ratio, earning yield, dividend yield percentage exposed cyclical behavior
- R/E ratio was fluctuated in smaller proportion
- The market value per share of joint venture banks stocks in security exchange center were significantly fluctuated and trading on high price
- Joint venture banks in Nepal were seen as growth banks because actual capitalization rate (  $r$  ) is higher than the normal capitalization rate (  $k$  ) which is  $r > k$
- Under CAPM the Beta Risk of Joint venture banks was less riskier

- Cash dividend per share of joint venture banks were significantly increasing in each year

**Pradhan's Study (Pradhan, 1993: 23-49)**

In study in stock market behavior in Nepal in 1992, the data were collected from 17 enterprises covering the year between 1986-1990. Following findings were observed in connection with dividend behavior:

- Higher the earnings on the stock leads the larger the ratio of dividend per share
- Stocks with larger ratio of dividend per share to the market price per share have higher liquidity, liquidity position of the stock, paying lower dividend is also more variable as compared to the stock paying higher dividend
- Stock with larger ratio of dividend per share to market price per share and interest coverage ratio
- Dividend per share and market price per share was positively correlated
- Positive relationship between dividend payout and liquidity
- Positive relationship between dividend payout and profitability
- Positive relationship between dividend payout and turnover ratio
- Positive relationship between dividend payout and interest coverage

**Manandhar's study (Manandhar, 2000: 5-12)**

The main statement of the problem of the study is to set test whether Nepalese corporate firms consider the lagged earning and dividend paid to pay the dividend in current year. To test this problem he has consider 17 corporate companies as samples and set different hypothesis and drawn the following conclusions:

- There is significant relationship between the change in dividend policy in terms of DPS and change in lagged earnings,
- In overall there is positive relationship between change in lagged consecutive earnings and dividend per share,
- There is relationship between distributed lag profits and dividend,
- When change in lagged consecutive earnings is greater than zero, in 65% the case change in dividend per share,

- Overall increase in (EPS) has resulted to increase in the dividend payment in 66.6% of the cases while decrease in EPS resulted decrease in dividend payment,
- Nepalese corporate firms have followed the practice of maintaining constant dividend payment per share,
- Corporate firm do not take into account one year or two year lagged earnings,

#### **Bhattarai's study (Bhattarai, 1990: 12-126)**

Bhattari has concluded a thesis study on "Share market in Nepal" in 1990 through some light on dividend performance of the companies. This thesis indicates the following findings:

- Many companies were paying less than the expected cash dividend per share of the investors. Most companies were under rating the expectations of investors and they're by resulting the low marketability of shares on trading floor of the stock exchange.
- There were miss match between calculated price and quoted price of the share observed only one calculated price of share was near the actual price of share. It clearly signals over pricing of the share and market price were guided by technical factors
- Most of the companies displaying the lower price earnings ratio
- The expected percentage of dividend of investors was not matching with the actual percentage. So, majority of the companies declaring les percentage than the risk free of return plus risk premium are unable to maintain investor's psychology in marketing.

#### **Adhikari's Study (2006)**

Adhikari (2006) focuses on "Investment Policy of Nepal Industrial Development Corporation." Researcher used different type of statistical tools i.e. mean, standard deviation, correlation, regression analysis etc have been used for analysis.

Main objectives of the study are:

- Analysis of fluctuation in the approved and disbursed loan.

- To analysis the role in the industrial development of the country the corporation.

The research findings and recommendation of the study are as follows:

- There is a fluctuation in the approved and disbursed loan.
- Sometimes, the approval amount has gone up but the disbursement has been lowered and vice versa, as well as there is increasing and decreasing trends in the investment pattern year by year.
- In view of the liberal economic policy adopted by HMG and open market competition, the corporation has made its investment policy more flexible and expanded into resources mobilizing sector.
- The corporation has given priority to the project based on indigenous raw materials and man power as well as sought the policy of investing in small hydro-electricity projects.

#### **Jha's Study (2007)**

Jha (2007) focuses on "Comparative Analysis of Financial Performance of Commercial Banks." The sample size only three banks which are NIBL, NGBL AND HBL. Researcher used different type of statistical tools i.e. mean, standard deviation, correlation, regression analysis etc have been used for analysis.

Main objectives of the study are:

- To analysis the loan providing system.
- Profitability analysis the selected banks.
- To analysis the earning capacity in average.

The research findings and recommendation of the study are as follows:

- General loan loss provision to total loan in case of Nabil has the highest among NIBL, NGBL and HBL.
- Credit deposit ratio stood the highest at the end to FY 1996/97 of the selected banks.
- NGBL has been investing most of its deposits in foreign investments.
- NGBL has the highest EPS and cash dividend per share in average.

- Nabil's other operating income is appeared higher than other banks.

### **Pandey's Study (2008)**

Pandey (2008), researched on "Pricing and yield behavior of equity shares in Nepal: A case of Commercial Banks" on March 2008.

The main objectives of the study are:

- To establish relationship between market prices of commercial bank's equity shares and their yield behaviour in Nepal.
- To see how effective is yield in determining the market price of the securities?
- If yield is not the sole determining factor then what could be other factors, which could affect the market prices of securities in Nepal.
- To identify problems of securities market in Nepal and suggest measures to correct the existing problems.

Main findings of this research are:

1. 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.
2. 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.

### **Shah's Study (2009: 7-83)**

Upat Lal Sah (2009) carried out a research on "Cash dividend practice and its impact on share price in Nepal". It covered 5years period (2004-2008) including commercial banks, manufacturing companies, development banks, insurance companies, and financial institutions and hotels sectors. Its basic objectives were to evaluate the trend

of cash dividend forecasting and payment by the Nepalese financial institution and to see and examine the impact of cash dividend on market price per share. To achieve these objectives, the information are interpreted and analyzed by using regression model and hypothesis test. Major finding of the study were as follows;

- Commercial banks of Nepal are seen the regular dividend paying financial institution.
- In average 90% companies pay less than 50% cash dividend. The company having good earning only have been paying regular cash dividend.
- The lack of financial knowledge and the market inefficiency has affected the market price of the share in all the firms. But it is theoretically argued.

## **2.4 Research Gap**

The above studies are performed by different researchers. Their weakness and drawbacks are also mentioned there with. This study will analyze the price determination of common stock in secondary market of Nepal. Usually the price of common stock in primary market is par value but in secondary market may be any price i.e. more, less or equal to par value. In this study, it is tried to carry out the distinct from other previous studies in terms of sample size, nature of the sample firms and methodology used. The study has covered two commercial banks and two insurance companies. Latest five years have been analyzed with due consideration of EPS, DPS, DPR & MPS. Taking in mind for more elaborate and extensive analysis, company wise analysis has also been made. In order to assess the impact of dividend on market price of share, available information from concerned banks and insurance were reviewed and analyzed. Regression analysis has been done assuming market price of share as dependent variable and other of variable like DPS, EPS & D/P ratio as independent variable. At last testing of hypothesis has been done. So, it has been believed that this study will be different from earlier one.

# **CHAPTER - III**

## **RESEARCH METHODOLOGY**

### **Introduction**

Research Methodology, describes the methods and process applied in the entire aspects of study. Every research should be outline in the systematic manner and for that reason Research Methodology is one of most important parts of every research. In fact, Research Methodology is a way to systematically solve the research problems. It refers to the various sequential steps to be adopted by a researcher is studying a problem with certain objects in views. (Kothari, 1978 P: 19). The basic objective of this study is to explain, test and analysis of dividend policy and its impact on Market Price of Stock, therefore, some systematic research methodologies has been used. This study is based on secondary data but also some relevant questions would be asked to the concerning bodies for the purpose of practical study. This chapter describes the methodology employed till the entire study will be conducted.

### **3.1 Research Design**

Research Design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances. (Kerlinger, 1978 P: 300).The research design basically followed the comparative evaluation of dividend policy in the sample firms and their effect on stock prices. Analytical and descriptive approaches are used to evaluate the dividend policy of the sample firms. The points are discussed basically on the basis secondary data, financial statements of five years from 2004/2005 to 2008/2009 taken from commercial banks and from respective firms and websites.

### **3.2 Population and Samples**

There are many commercial banks and insurance companies. Whose shares are traded actively in stock market, hence it is not possible to study all of them. Therefore, two Banks and two insurance companies from the respective sector a chosen as sample among the entire sectors the entire sectors (Population).



The sample companies are followings:

### **Commercial Banks**

- Nepal Arab Bank Limited (NABL)
- Himalayan Bank Limited (HBL)

### **Insurance Companies**

- Himalayan General Insurance Company Limited (HGICL)
- United Insurance Company Nepal Limited (UINCL)

## **3.3 Source & Technique of Data Collection**

All the analysis will be based on secondary data. Secondary source of data is those, which are publicity available in beforehand. In this study data are collected from different sources i.e. Insurance Board, Nepal Stock Exchange, and Website such as [www.nepalstock.com](http://www.nepalstock.com) and [www.google.com](http://www.google.com)

Plus the respective firms central office. From these organizations, annual reports are collected and some related information all taken from Economic Survey and People concerning and relevant to the study. For the purpose of analysis of data 5 years will be taken as sample from 2008/2009. These will be analyzed in two ways:

- i) Using financial tools
- ii) Using Statistical tools

## **3.4 Data Analysis Tools**

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

- Financial tools
- Statistical tools

### **A) Financial Tools**

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

**i) Earnings per Share (EPS)**

EPS is calculated to know the earning capacity and to make the comparison between the commercial banks and insurance companies according to their respective sectors.

EPS defined as the result received by dividing net profit after taxes by number of common stock outstanding. In equation:

$$EPS = \frac{Net\ Profit}{No.ofCommonStockOutstanding}$$

**ii) Dividend Per Share (DPS)**

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

$$DPS = \frac{TotalDividend}{No.OfCommonStockOutstanding}$$

**iii) Dividend Payout Ratio (D/P ratio)**

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

$$D/P\ Ratio = \frac{DPS}{EPS}$$

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

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

## 1. Statistical Tools

### I) Arithmetic Mean

Arithmetic mean of a given set of observation is their sum dividend by the number of observation. In general  $X_1, X_2, \dots, X_n$  are the given “n” observations, than their arithmetic mean denoted by is given by :

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_n)}{n}$$
$$\text{Or } \bar{X} = \frac{\sum x}{n}$$

Where  $\bar{X}$  denotes means,  $X_1, X_2$  and  $X_n$  are given set of observations and n denotes no of items observed.

### II) The coefficient of Variation (C.V)

The coefficient of variation is the relative measure of dispersion, comparable across, which is defined as the ratios of the standard deviation to the mean expressed in percent. (Richard I. Levin & David S. Rubin, 1994 P: 114)

In Symbol

$$CV = \frac{S.D.}{\bar{x}} \times 100$$

Where:

S.D. = Standard Deviation

$\bar{x}$  = Mean average

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

### III) Standard Deviation (S.D.)

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

In Symbol

$$\text{S.D.} = \sqrt{\frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2}$$

#### **IV) Coefficient of Correlation ( r )**

Correlation analysis is the statistical tools that can be used to describe the degree one variable are linearly related to another. The coefficient of correlation measures the direction of relationship between two sets of figures. It is the square roots of the coefficient of determination – correlation can either be positive or it can be negative. If both variables are changing in the same direction, the correlation is said to be positive but when the variations in the two variables take place in opposite direction, the correlation is termed as negative. In this study, coefficient of correlation is calculated between stock prices and dividends, stock prices and retained, stock prices and lagged earning.

#### **V) Coefficient of (Multiple) Determination ( R<sup>2</sup> )**

The coefficient of determination is a measure of degree (extent or strength) of linear association or correlation between two variables, one of which happens to be independent and other being dependent variable. In other words, R<sup>2</sup> measures the percentage total variation in dependent variables explained by independent variable the coefficient of determination can have value ranging from zero to one. A value of one can occur only if the unexplained variation is exactly on the regression line. In this study, R<sup>2</sup> is calculated as the requirement of model.

#### **VI) Regression Equation**

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

between one variable called dependent or explained variable and more than one other variables called independent or explanatory variable. The regression analysis submits the following two concepts:

**a) Regression Constant (a)**

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

**b) Regression Coefficient (b)**

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

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

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

**VIII) t-Statistics**

To test the validity of our assumption, if sample size is less than 30, t-test is used for applying t-test in the context of small sample, the “t” value is calculated first and then compared with the table value of “t” at a certain level of significance for given degree

of freedom. If the calculated value of “t” exceeds the table value, we infer that the difference is significant at 5% level but if “t” value is less than the concerning table value of the “t” the difference is not treated as significant.

### **IX) F-Statistic**

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

### **3. 5 Regression Model Used**

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

$$a) y_1 = a + b x_1$$

$$y_1 = \text{MPS of NABIL}$$

$$x_1 = \text{DPS of NABIL}$$

$$b) y_2 = a + b x_2$$

$$y_2 = \text{MPS of NABIL}$$

$$x_2 = \text{EPS of NABIL}$$

a & b are regression coefficient a & b are regression coefficient

$$c) y_3 = a + b x_3$$

$$y_3 = \text{DPS of NABIL}$$

$$x_3 = \text{EPS of NABIL}$$

$$d) y_4 = a + b x_4$$

$$y_4 = \text{MPS of HBL}$$

$$x_4 = \text{DPS of HBL}$$

a & b are regression coefficient a & b are regression coefficient

e)  $y_5 = a + b x_5$

f)  $y_6 = a + b x_6$

$y_5 =$  MPS of HBL

$y_6 =$  DPS of HBL

$x_5 =$  EPS of HBL

$x_6 =$  EPS of HBL

a & b are regression coefficient a & b are regression coefficient

g)  $y_7 = a + b x_7$

h)  $y_8 = a + b x_8$

$y_7 =$  MPS of HGICL

$y_8 =$  MPS of HGICL

$x_7 =$  DPS of HGICL

$x_8 =$  EPS of HGICL

a & b are regression coefficient a & b are regression coefficient

i)  $y_9 = a + b x_9$

j)  $y_{10} = a + b x_{10}$

$y_9 =$  DPS of HGICL

$y_{10} =$  MPS of HGICL

$x_9 =$  EPS of HGICL

$x_{10} =$  DPS of HGICL

a & b are regression coefficient a & b are regression coefficient

k)  $y_{11} = a + b x_{11}$

l)  $y_{12} = a + b x_{12}$

$y_{11} =$  MPS of UICNL

$y_{12} =$  DPS of UICNL

$x_{11} =$  EPS of UICNL

$x_{12} =$  EPS of UICNL

a & b are regression coefficient

a & b are regression coefficient

## 2. The Multiple regressions are as follows:

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

Where:  $D_t =$  DPS at time t

$E_t =$  EPS at time t

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

a,  $b_1$  &  $b_2$  are regression coefficients

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

Where:  $P_t$  = MPS at time t

$D_t$  = DPS at time t

$E_t$  = EPS at time t

a,  $b_1$  &  $b_2$  are regression coefficients

### **3.6 Limitation of the Methodology**

The analysis on the secondary data is obtained from financial statement provided by NEPSE through website. The regression analysis along with other remaining analysis is based on the polled data from the mentioned source.

The reliability of the statistical tools used and lack of experience is primary limitation of the research work. Besides the dividend has been referred only to the cash dividend. The computer model namely SPSS, has been used for statistical calculation, therefore, technical error possibly may exist with least chance.



## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

This chapter deals with presentation and analysis of data collected from annual reports of the bank. The raw data collected has been organized and processed using various tools discussed in the previous chapter- “Research Methodology”. In this chapter data and information are presented and analyzed using different financial and statistical tools in order to achieve the objectives of the study.

#### **4.1. Analysis of Overall Performance of Companies**

Performance of companies is a broad subject, which can be examined in various ways. The current owners of the company, the potential investors, employees, creditors, government, customers etc. analyze the performance in their own ways based on their own interest. Although it is not possible to fulfill the interest of all the stakeholders about the performance of the companies, this study tries to help more or less all of them by examining the performance of the joint venture banks listed in NEPSE Ltd. This study specifically provides higher attention to the investors to know about stock price and the analysis is also directed in the best of the stock price. For the analysis of the performance of joint venture banks, market price per share, net worth per share, earning per share, dividend per share, return on total assets, return on equity and liquidity ratio are analyzed.

##### **4.1.1. Market Price per Share (MPS)**

Market price per share is the price at which shares are traded in the stock market. Those shares are transacted in the secondary markets, which are already issued to the public. Organized stock exchange centers are known as secondary market where trading of the stocks are conducted. Market value in the secondary market is determined by supply and demand factors and reflects the consensus opinion of investors and traders concerning the value of the stock. In an efficient market a set of information is fully and immediately reflected in market price. Market price per share of a company reflects the performance of the company. Performance evaluation thus

could be defined as analysis of common stock. The demand of the stocks of better companies will be higher and market price per share of those companies also will be higher in the stock market.

The market price per share of listed companies is a good measure of performance. A higher market price per share indicates the better performance of the company and vice versa. Whether a market price per share is high or low is difficult to determine. For this, the financial analysis has to compare it with the book value per share and also with the market price share of other companies. The market price per share of selected joint venture banks is presented in Table no. 4.1: the table shows,

**Table 4.1**  
**Market Price per Share of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	920	870
2005-2006	1100	1379
2006-2007	1740	2430
2007-2008	1980	3132
2008-2009	1780	2455
Mean	1540	2053.2
S.D.	414.61	642.14
C.V.	27.57	31.28

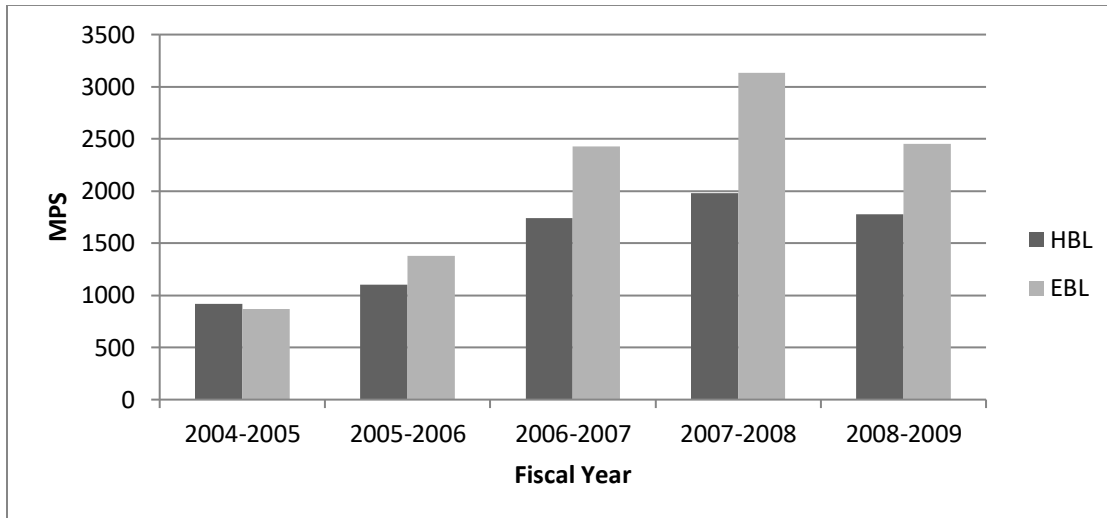
*Source: Annex 3*

The average closing MPS of HBL during the period of study is 1504 with standard Deviation of 414.61 and a coefficient of variation of 27.57. This implies that the share price of HBL is highly fluctuating in nature.

EBL has the closing MPS range between Rs. 3132 and Rs. 870 during the period of study. An average closing MPS of Rs. 2053.20 is noted during this period. The standard deviation of the closing MPS is 642.14. The C.V. of 31.28 indicates that there is a fluctuation of 31.28% in the closing MPS of EBL during the period of the

study, which is high. From the table 4.1, it can be seen that the average closing MPS of EBL is the highest than that of HBL. Similarly, the standard deviation of EBL is highest and HBL is lowest. The coefficient of variation of these two banks shows that there is an above moderate level of fluctuations in the MPS.

**Figure 4.1**  
**Market Price per Share of Sample Banks**



#### **4.1.2. Net Worth per Share (NWPS)**

Net worth is the owner’s equity in the company. It is also known as book value of the company. The book value per share is computed by dividing the amount of total shareholder's equity, which is called net worth, by the number of shares outstanding (Weston and Brigham, 1996:675). This figure represents the asset value per share after deducting liabilities and preferred stock (Cheney and Moses, 1993:417). Book value is a historical cost amount. It represents the real or actual value of the common stock. Generally, market price of stock is greater than book value of the stock. This clearly indicates that higher net worth per share is the signal of better companies. Therefore, the net worth per share is a good measure of performance of joint venture banks. The net worth per share of the banks under study is presented in table and graph as follows:

**Table 4.2**  
**Net Worth per Share of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	239.59	219.83
2005-2006	228.72	217.67
2006-2007	264.74	280.82
2007-2008	247.95	321.77
2008-2009	256.52	313.64
Mean	247.50	270.75
S.D.	12.60	44.62
C.V.	5.09	16.48

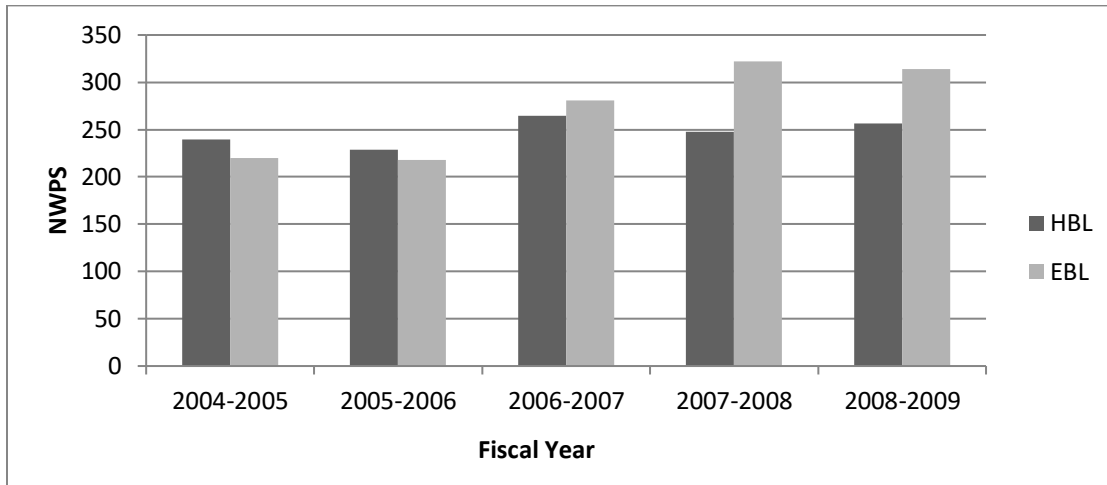
*Source: Annex 3*

The average NWPS of HBL during the period of the study is Rs. 247.50 with standard deviation of 12.60 and a coefficient of variation of 5.09.

EBL within the period of study had an average NWPS of Rs. 270.75, ranging between Rs.217.67 and Rs. 321.77. The standard deviation is 44.62 and the coefficient of variation shows that there is fluctuation of 16.48% in the NWPS of EBL during the period of study.

From the table 4.2, it can be seen that NWPS of HBL is the highest and that of EBL is the lowest. Similarly, the standard deviation of EBL is highest and HBL is the lowest. The coefficient of variation of these two banks shows that there is an above moderate level of fluctuations in the NWPS.

**Figure 4.2**  
**Net Worth per Share of Sample Banks**



#### 4.1.3. Earnings per Share (EPS)

Profit is the lifeblood of any company. Although the company can run without profit in short period, it cannot run and exist over the long period. Therefore, sufficient earning is necessary for the company to satisfy its owners. Earnings of the shareholders are the residual amount that remains after deducting all the expenses, interest, taxes and dividends to preferred shareholders from the revenue. Earnings per share are the amount available to the holders of each share. It is calculated by dividing the total earnings available to common shareholders by the total number of shares outstanding. EPS is a good measure of performance because it integrates all the major financial ratios and provides holistic information. Overall financial model states EPS as follows:

$$\text{EPS} = \text{Asset Turnover} \times \text{Margin on Sales} \times \text{Financial Leverage} \times \text{Book Value per Share}$$

EPS is the overall result of turnover, profitability, leverage and book value per share. It provides combined result of total assets turnover, return on sales debt and equity position in the capital structure, and the book value per share of the company. Higher EPS shows the better earning capacity of the company. The EPS is thus a good measure of performance of companies. A company with higher earnings per share not

only can satisfy its existing shareholders and attract potential investors but also contribute to government, society and ultimately to the nation. The EPS of the banks under study are presented in table and graph as follows:

**Table 4.3**  
**Earnings per Share of Sample Banks**

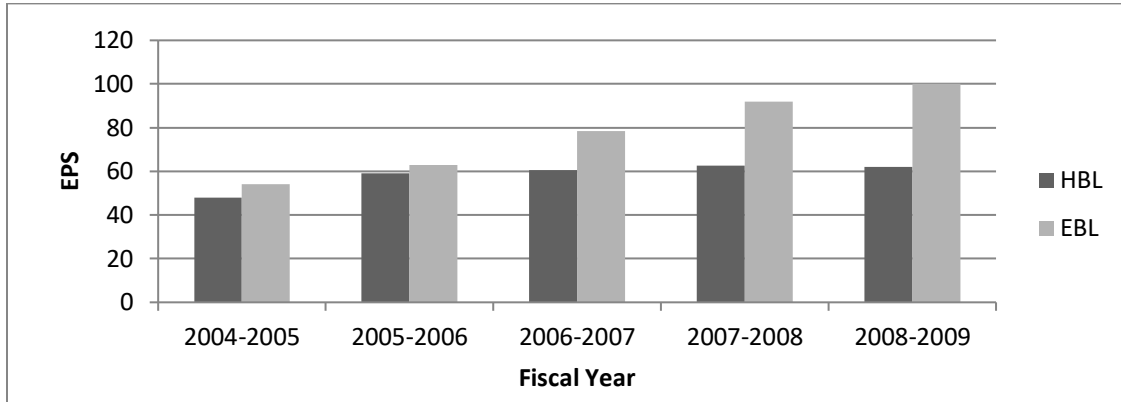
<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	47.91	54.22
2005-2006	59.24	62.78
2006-2007	60.66	78.42
2007-2008	62.74	91.82
2008-2009	61.90	99.99
Mean	58.49	77.44
S.D.	5.45	17.00
C.V.	9.32	21.96

*Source: Annex- 3*

The average EPS of HBL during the period of study is Rs.58.49 with standard deviation of Rs. 5.45 and the coefficient of variation shows that there is fluctuation of 9.32%. EBL has the EPS range between Rs. 98.99 and Rs. 54.22 during the period of study. An average EPS of Rs. 77.44 is noted during this period. The standard deviation of the EPS is Rs. 17.00. The coefficient of variation shows that there is fluctuation of 21.96% in the EPS of EBL during the period of study.

From the table 4.3, it can be seen that average EPS of EBL is the highest than that of HBL. Similarly, the standard deviation of EBL is highest and HBL is the lowest. The coefficient of variation of these banks shows that there is an above moderate level of fluctuations in the EPS.

**Figure 4.3**  
**Earnings per Share of Sample Banks**



#### 4.1.4. Dividend per Share (DPS)

Investors on the common stocks are attracted to the dividends because it is the return on their investment. Not all companies can provide higher dividends to the common stockholders. For this, they need larger amount of profit. From the total earnings available to common stockholders, the company may retain some earnings for planned investment and distribute remaining amount to common stockholders, or the company may distribute dividends at fixed amount or constant payout ratio as per its dividend policy. Dividend per share is the regular amount available to the holders of each common stock by the company. Evaluation of performance of listed companies in terms of dividend per share (DPS) is considered as an appropriate measure, which shows the company's earnings and dividend paying capacity. DPS is the result of various ratios as follows:

$$DPS = \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Total Assets}}{\text{Equity}} \times \frac{\text{Equity}}{\text{No. of Shares}} \times \frac{\text{Dividend}}{\text{Net Income}}$$

DPS includes dividend decision in earnings per share. Although the behavior of companies towards dividend payment is disappointing in Nepal, the joint venture banks, other financial institutions, and some other companies have brought greater revolution in this trend. They are competing for paying larger amount of dividends in recent years. The DPS of the banks under study are presented in table and graph as follows:

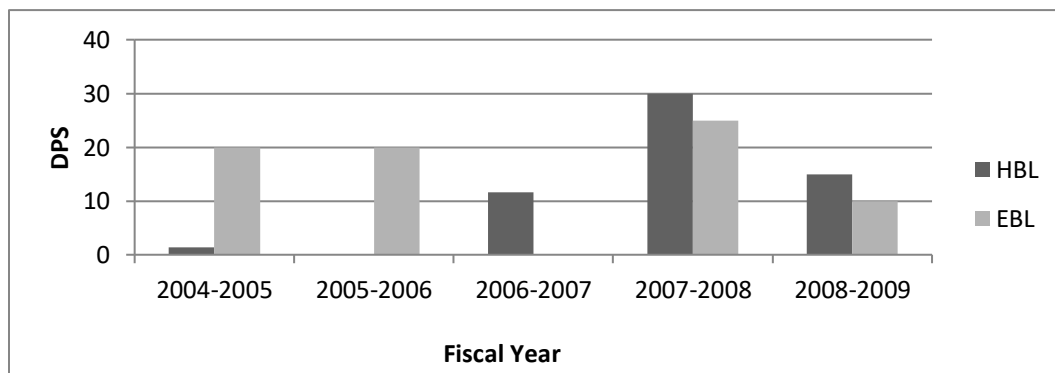
**Table 4.4**  
**Dividend per Share of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	1.32	20
2005-2006	0	20
2006-2007	11.58	0
2007-2008	30	25
2008-2009	15	10
Mean	11.58	15
S.D.	12.3323	7.6376
C.V.	106.5070	50.9175

*Source: Annex 3*

HBL has an average DPS of Rs. 11.58. The highest DPS is Rs. 30 whereas it has not paid dividend in the years 2003/2004. The standard deviation is 12.3323 and coefficient of variation is 106.50%. The C.V indicates that the DPS of HBL is quite fluctuating. EBL paid the highest DPS of Rs. 25. No dividend was paid in the year's 2004/2005. An average DPS of Rs. 15 has been noted during the study period. The standard deviation of the DPS is 7.6376. The coefficient of variation is 50.92% which indicates that there is a moderate fluctuation during the period. From the table 4.4, it can be seen that the EBL has the highest DPS and HBL has the lowest. The standard deviation of HBL is highest than that of EBL whereas, the coefficient of variation indicates that among these two banks under study during the period DPS of HBL is highly fluctuating in comparison of EBL.

**Figure 4.4**  
**Dividend per Share of Sample Banks**





#### 4.1.5. Price Earnings Ratio (P/E Ratio)

The price earnings ratio is widely used by the security analysts to value the firm's performance as expected by investors. It indicates investor's expectations about the firm's performance. Management is also interested in this market appraisal of the firm's performance and will like to find the causes if the P/E ratio declines. P/E ratio reflects investor's expectations about the growth in the firm's earnings. Industries differ in their growth prospects accordingly; the P/E ratios for industries vary widely. Price earnings ratio is the ratio between market price per share and earnings per share. It is also called earning multiplier. The price earnings ratios of the banks under study are presented in table and graph as follows:

**Table 4.5**  
**Price Earnings Ratio of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	16.91	14.88
2005-2006	17.13	14.92
2006-2007	19.2	16.05
2007-2008	18.57	22
2008-2009	28.69	31
Mean	20.1	19.77
S.D.	4.8973	6.9351
C.V.	24.3646	35.0789

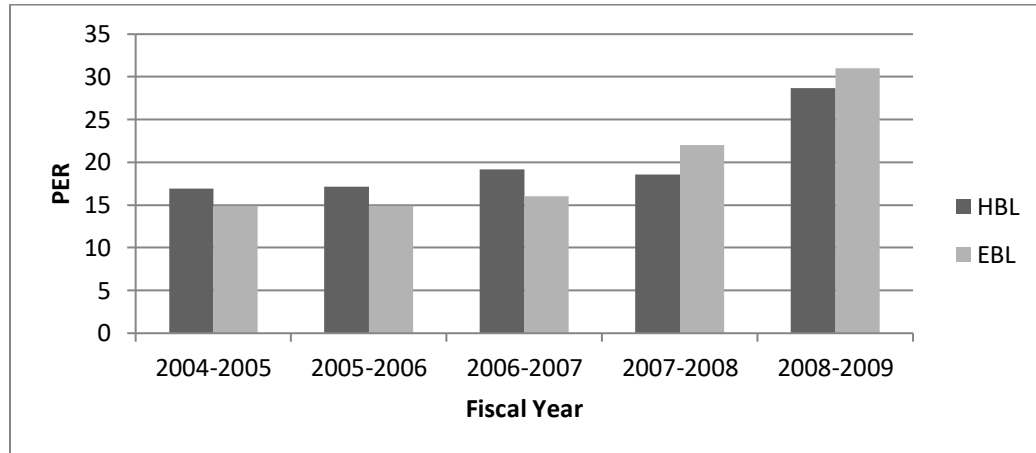
*Source: Annex 3*

HBL has an average P/E Ratio of 20.1 ranging between 28.69 and 16.91 during the period of study. The standard deviation is 4.8973 and the fluctuation of 24.36% in the P/E Ratio is seen during this period. The average P/E ratio of EBL is 19.77 ranging between 31 and 14.88 during the period of study. The standard deviation is 6.9351 whereas coefficient of variation is 35.08% which shows indicates that the bank has an average fluctuation in P/E Ratio during the period.

From the table 4.5, it can be seen that the HBL has the highest average P/E Ratio and HBL has the lowest. Similarly, the standard deviation of EBL is highest than that of HBL. The correlation of variation indicates that among the banks under study during

period, EBL has highly fluctuating whereas; HBL has the low fluctuation of P/E Ratio.

**Figure 4.5**  
**Price Earnings Ratio of Sample Banks**



#### **4.1.6 Dividend Yield**

Dividend yield is the rate of return on the form of dividends. It is relative term, which is calculated by dividing dividend per share by market price per share. Only higher dividends or lower dividends do not matter to investors. So, it is essential to determine the rate of return on their investment. Dividend yield is an appropriate measure which helps to decide whether to make investment or not in a common stock. Sometimes, lower dividends also produce higher yield and higher dividends also produce lower yield. Therefore, dividend yield helps to investors to know the rate of return in the form of dividends. The Dividend Yield of the banks under study is presented in table and graph as follows:

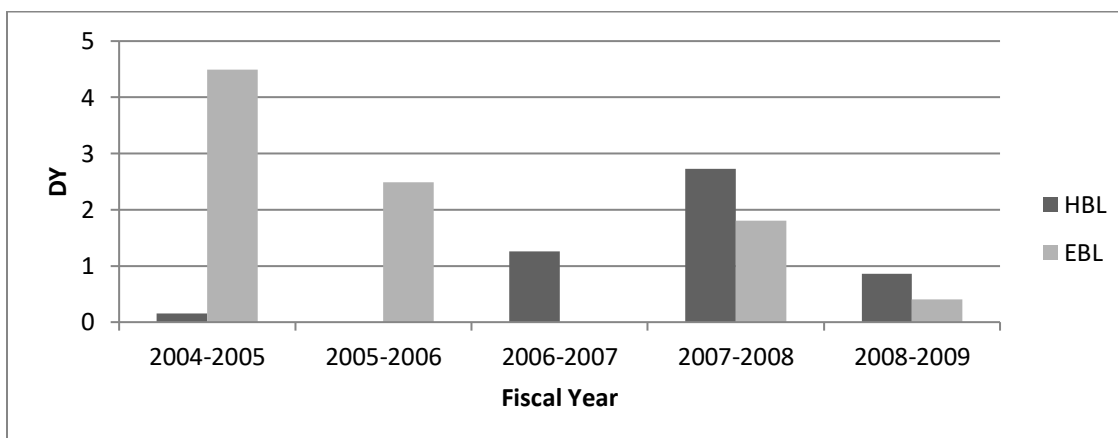
**Table 4.6**  
**Dividend Yield of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	0.16	4.49
2005-2006	0	2.49
2006-2007	1.26	0
2007-2008	2.73	1.81
2008-2009	0.86	0.41
Mean	1.002	1.93
S.D.	1.1227	1.8165
C.V.	112.0510	94.1202

*Source: Annex 3*

During the period of study, HBL has an average Dividend Yield of 1.002 with standard deviation of 1.1227. The DY range between 2.73% and 0% and the coefficient of variation shows that there is a fluctuation of 112.05%. EBL has the DY range between 4.49% and 0% during the period of study. An average DY of 1.93% is noted during the period of study. The standard deviation of the DY is 1.8165. The coefficient of variation 94.1202 indicates that there is a fluctuation of 94.12% in the DY of EBL, during the period of study. From the table 4.6, it can be seen that the average DY of EBL is the highest than that of HBL. The DY range of these two banks under study during the period is between 4.49% and 0%. The coefficient of variation of these banks shows a high level of fluctuation in the DY.

**Figure 4.6**  
**Dividend Yield of Sample Banks**



## **4.2. Financial Tools**

Financial analysis is the act of identifying the financial strength and weakness of the organization presenting the relationship between the items of balance sheet. For the purpose of this study, ratio analysis has been mainly used and with the help of it, data have been analyzed. Various financial ratios related to the financial performance and stock price of commercial banks are presented and discussed to evaluate and analyze the performance of HBL and EBL. The ratios are designed and calculated to highlight the relationship between financial items and figures. It is a kind of mathematical relationship and procedure dividing one item by another. All these calculations are based on financial statements of concerned banks. The important and needed financial ratios, which are to be calculated for the purpose of this study, are mentioned below:

### **4.2.1. Liquidity Ratios**

Liquidity ratios measure the firm's ability to meet current obligations. The failure of a company to meet its obligations due to the lack of sufficient liquidity may result in bad credit image and loss of creditors. An improved liquidity position is an indicator of better performance. Firm should always maintain an appropriate level of liquidity. The most common ratios, which indicate the extent of liquidity or lack of it, are current ratio. Current ratio is calculated by dividing current assets by current liabilities. As conventional rule, a current ratio of 2 to 1 or more is considered satisfactory. However, an arbitrary standard of 2 to 1 should not be blindly followed. Firms with less than 2 to 1 current ratio may be doing well, while firms with 2 to 1 or even higher current ratios may be struggling to meet their obligation. This is so because the current ratio is a test of quantity, not quality. These ratios are presented in the table and graph as follows:

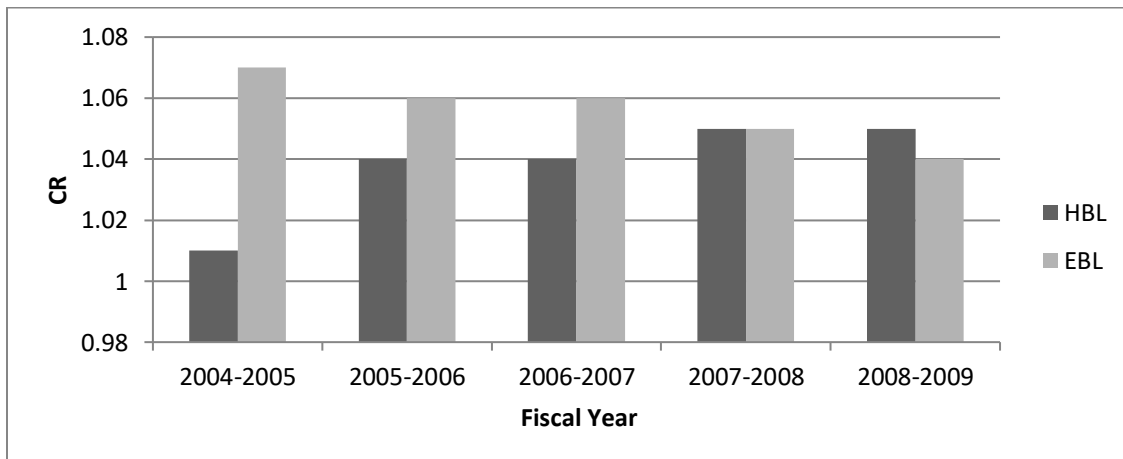
**Table 4.7**  
**Current Ratio of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	1.01	1.07
2005-2006	1.04	1.06
2006-2007	1.04	1.06
2007-2008	1.05	1.05
2008-2009	1.05	1.04
Mean	1.038	1.056
S.D.	0.0164	0.0114
C.V.	1.58	1.0797

*Source: Annex 3*

HBL has an average current ratio of Rs. 1.04. The highest current ratio is Rs. 1.05 in the years 2005-2006 and 2006-2007. The standard deviation is 0.0164 and coefficient of variation is 1.58% which indicates that the current ratio of HBL is moderate. The average current ratio of EBL is Rs. 1.0797 with the standard deviation of 0.0114. The coefficient of variation is 1.08%, which indicates that there is low fluctuation than that CR of HBL. From the table 4.7, it can be seen that the HBL has the highest current ratio than that of EBL during the time period of study. The coefficient of variation indicates that among these two banks under study during the period no banks have the highest fluctuation.

**Figure 4.7**  
**Current Ratio of Sample Banks**



#### 4.2.2. Return on Total Assets (ROTA)

The term investment may refer to total asset. Return on total assets helps to identify what percent of the total asset is earned within a specified period. The companies having higher ROTA is regarded as best performers. The ROTA of the banks under study is presented in table and graph as follows:

**Table 4.8**  
**Return on Total Assets of Sample Banks**

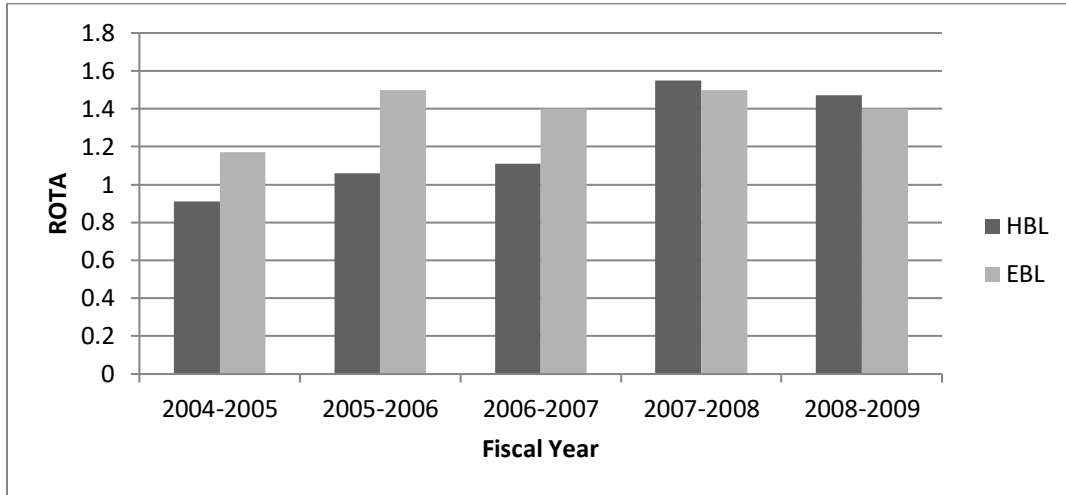
<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	0.91	1.17
2005-2006	1.06	1.50
2006-2007	1.11	1.40
2007-2008	1.55	1.50
2008-2009	1.47	1.40
Mean	1.22	1.3940
S.D.	0.27622	1.3483
C.V.	22.6414	96.7217

*Source: Annex 3*

HBL has an average of ROTA of 1.22 ranging between 0.91 and 1.55 during the period of study. The standard deviation is 0.28 and the fluctuation of 22.64% in the ROTA is seen during this, period, which is very low. The average ROTA of EBL, during this period of study is 1.3940. It is within the range of 1.17 and 1.50. The standard deviation of ROTA is 1.3483 whereas; coefficient of variation is 96.72% indicates the high fluctuating nature of ROTA in EBL. From the table 4.8, it can be seen that the EBL has the highest average ROTA than that of HBL. The coefficient of variation indicates that among these two banks under study during period, HBL has the highest consistency in ROTA whereas the ROTA ratio of EBL is highly fluctuating.

**Figure: 4.8**

**Return on Total Assets of Sample Banks**



**4.2.3. Return on Equity (ROE)**

Return on Equity indicates how well the firm used the resources of owners. The earning of a satisfactory return is the most desirable objective of a business. The ratio of net profit to owner's equity of company should be compared with the ratios for other similar companies and the industry average. This will reveal the relative performance and strength of the company in attracting future investments. The return on equity is net profit after taxes divided by shareholder's equity. The ROE of the banks under study is presented in table and graph as follows:

**Table 4.9**

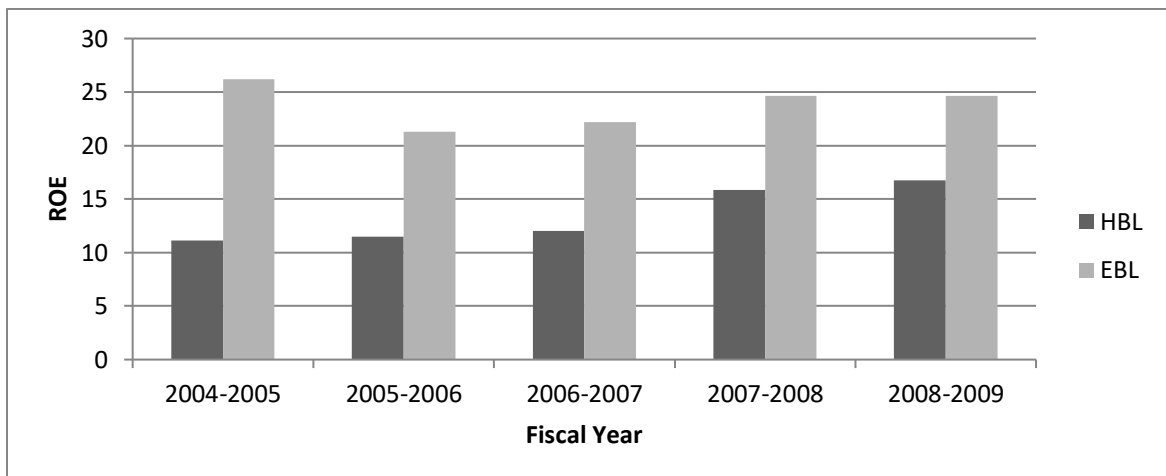
**Return on Equity of Sample Banks**

Year	HBL	EBL
2004-2005	11.13	26.18
2005-2006	11.48	21.31
2006-2007	12	22.19
2007-2008	15.85	24.64
2008-2009	16.75	24.67
Mean	13.44	23.76
S.D.	2.65	2.06
C.V.	19.69	8.68

*Source: Annex 3*

HBL has an average ROE of 13.22 ranging between 11.13 and 16.75 during the period of study. The standard deviation is 2.65 and the fluctuation of 19.69% in the ROE is seen during this, period, which is moderate. The average ROE of EBL, during this period of study is 23.76. It is within the range of 21.31 and 26.18. The standard deviation of ROE is 2.06 whereas; coefficient of variation is 8.68% indicates that the bank has the low fluctuation in ROE during the period. From the table 4.9, it can be seen that the EBL has the highest average ROE than that of HBL. The coefficient of variation indicates that among these two banks under study during period, HBL has the highest consistency in ROE whereas the ROE ratio of EBL is highly fluctuating.

**Figure 4.9**  
**Return on Equity of Sample Banks**



### 4.3. Turnover Ratios

Turnover ratios are employed to evaluate the efficiency with which the firm manages and utilize its assets. These ratios indicate the speed with which assets are being converted or turned over into sales. It involves a relationship between sales and assets. A proper balance between sales and assets generally reflects that assets are managed well.

#### 4.3.1. Fixed Assets Turnover Ratio

Fixed Asset Turnover shows its efficiency of utilizing fixed assets. It is calculated by net income divided by Net Fixed Assets.



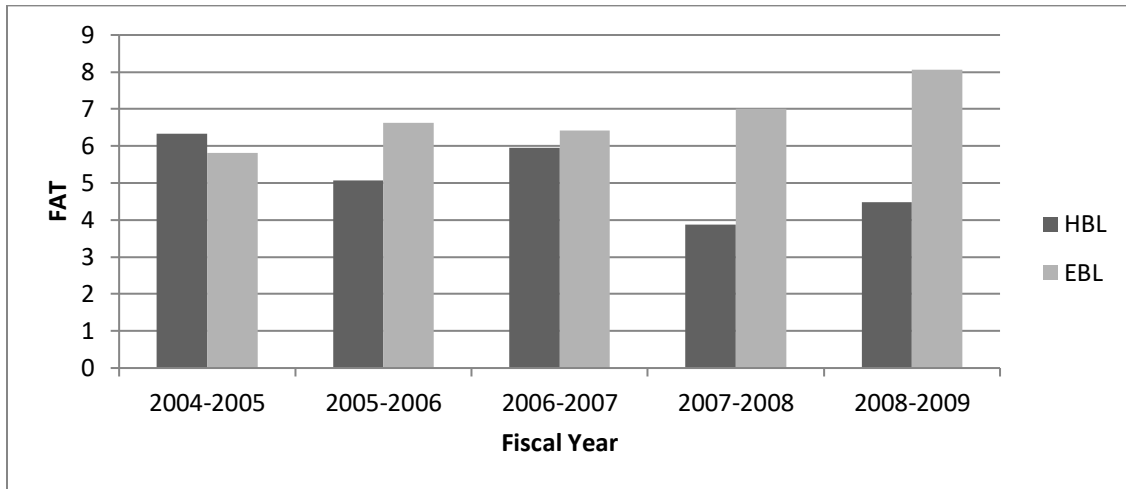
**Table 4.10**  
**Fixed Asset Turnover of Sample Banks**

<b>Year</b>	<b>HBL</b>	<b>EBL</b>
2004-2005	6.33	5.81
2005-2006	5.07	6.63
2006-2007	5.95	6.41
2007-2008	3.88	7.01
2008-2009	4.49	8.06
Mean	5.1440	6.7840
S.D.	1.0108	0.8354
C.V.	19.6507	12.3141

*Source: Annex 3*

HBL within the period of study had an average Fixed Assets Turnover of Rs.5.1440 ranging between Rs. 6.33 and Rs. 3.88. The standard deviation is 1.0108 and the fluctuation of 19.65% in the Fixed Assets Turnover is seen during the period of study. EBL has the Fixed Assets Turnover range between Rs. 5.81 and Rs. 8.06 during the period of study. An average Fixed Assets Turnover is Rs. 6.7840. The standard deviation of the Fixed Assets Turnover is Rs. 0.8354. The coefficient of variation of 12.3141 indicates that there is a fluctuation of 12.31% in the Fixed Assets Turnover of EBL. From the table 4.10, it can be seen that average Fixed Assets Turnover if EBL is highest than that of HBL. Similarly, the standard deviation of HBL is the highest and EBL is the lowest. The coefficient of variation of these banks shows that there is an above low level of fluctuations in the Fixed Assets Turnover.

**Figure 4.10**  
**Fixed Assets Turnover of Sample Banks**



#### 4.3.2 Total Assets Turnover

Total assets turnover shows the firm's ability in generating sales from all financial resources committed to total assets. Total assets turnover is calculated by dividing the net income by total assets. The total assets turnover table is tabulated below:

**Table 4.11**  
**Total Assets Turnover of Sample Banks**

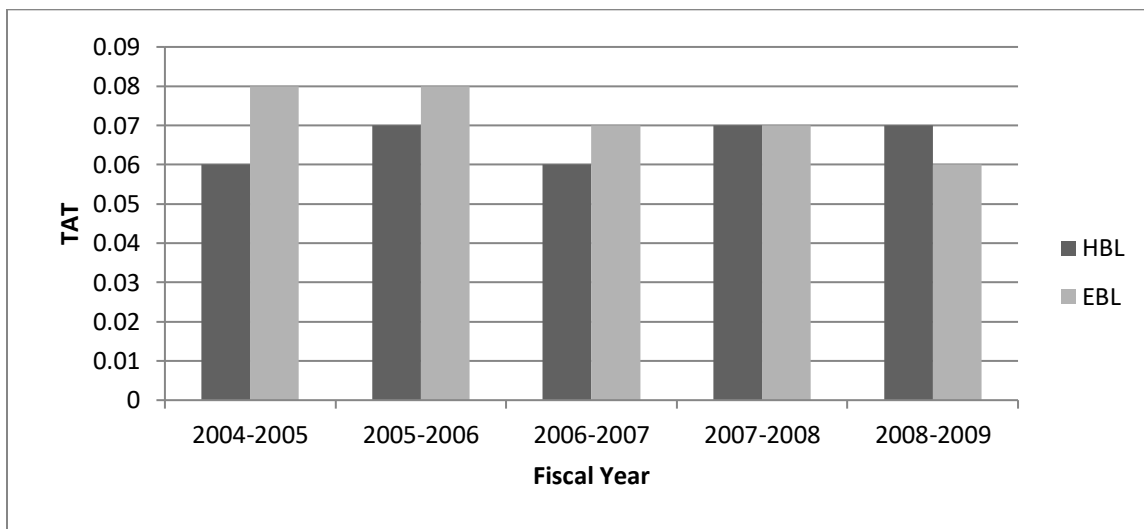
Year	HBL	EBL
2004-2005	0.06	0.08
2005-2006	0.07	0.08
2006-2007	0.06	0.07
2007-2008	0.07	0.07
2008-2009	0.07	0.06
Mean	0.0660	0.0720
S.D.	0.0055	0.0084
C.V.	8.31	11.6203

*Source: Annex 3*

The average Total Assets Turnover of HBL during the period of study is Rs. 0.0660 with standard deviation of Rs. 0.0055. The coefficient of variation shows that there is fluctuation of 8.31% in Total Assets Turnover of HBL. EBL has the Total Assets Turnover range between Rs. 0.06 and Rs. 0.08 during the period of study and the average of Total Assets Turnover of EBL is 0.07. The standard deviation of the Total Assets Turnover is Rs.0.0084. The coefficient of variation of 11.62% indicates that there is a fluctuation of 11.62% in the Total Assets Turnover of EBL. From the table 4.11, it can be seen that average Total Assets Turnover of EBL is the highest than that of HBL. Similarly, the standard deviation of EBL is the highest and HBL has the lowest. The coefficient of variation of these two banks shows that there is a low level of fluctuations in the Fixed Asset Turnover.

**Figure 4.11**

**Total Assets Turnover of Sample Banks**



#### **4.4. Correlation and Regression Analysis**

Correlation analysis helps to describe the degree to which one variable is linearly related to another. In other words, correlation analysis gives the extent to which the two variables correlate and the direction along which they move. Therefore, this statistical tools is applied here to find the linear relationship between MPS and various financial tools like EPS, DPS, Dividend yield, P/E Ratio, NWPS, current ratio, return on total assets, return on equity, fixed assets turnover, total assets

turnover and interest coverage. Regression analysis objects the study of relationship between the financial variables and MPS. It determines what changes in the dependent variable is brought about by a unit change in the independent variable. The coefficient of determination is also used in explaining the variation in MPS due to the variation in independent variables such as:

#### 4.4.1 Correlation and Regression Analysis between MPS and EPS

**Table 4.12**  
**Correlation and Regression Analysis between MPS and EPS**

<b>Banks</b>	<b>Regressi on Model</b>	<b>a</b>	<b>b</b>	<b>See</b>	<b>r</b>	<b>R<sup>2</sup></b>	<b>S.E.( r)</b>	<b>P.E( r)</b>	<b>Signification/ Insignificant</b>
<b>HBL</b>	Y=a+ bX	- 1656. 968	51.5 22	242.64 30	0.8 33	0.69 5	0.13 64	0.09 20	<b>Significant</b>
<b>EBL</b>		- 1053. 367	40.8 67	302.60 7	0.9 43	0.89 0	0.04 92	0.03 32	<b>Significant</b>

*Source: Annex 4*

Table 4.12 contains the different indicators helpful to analyze the simple correlation and regression between EPS and MPS of observed 2 joint venture banks. Where EPS is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

#### **HBL**

The regression constant or intercept coefficient (a) is -1656.968, which shows that the average MPS would be Rs. -1656.968 if the EPS were zero. The result shows that the slope of the regression line (b) is 51.522, which indicates that positive correlation exists between EPS and MPS of HBL. One rupee increases in EPS causes Rs. 51.522 increase in MPS of the bank. The estimation of MPS may vary by Rs. 242.6430 as the standard error of the model for HBL. The coefficient of determination (r<sup>2</sup>) is 0.695, which indicates that 69.5% of the variation in MPS is affected of determined by the

explanatory variable EPS. The simple correlation coefficient (r) between EPS and MPS is 0.833, which indicates that there is a strong positive relationship between EPS and MPS of HBL. Similarly, the Probable Error (P. Er) of this bank is 0.0920; it is used to find out the significance of the obtained values. Here, since r is more than 6.P.E. (r) i.e.

(0.0920×6=0.5520), we can say that the correlation is significant.

### **EBL**

The regression constant or intercept coefficient (a) is -1656.968, which shows that the average MPS would be Rs. -1656.968 if the EPS were zero. The result shows that the slope of the regression line (b) is 40.867, which indicates that positive correlation exists between EPS and MPS of EBL. One rupee increases in EPS causes Rs. 40.867 increase in MPS of the bank. The coefficient of determination (r<sup>2</sup>) is 0.890, which indicated that 89% of the variation in MPS is affected or determined by the explanatory variable EPS. The simple correlation coefficient (r) between EPS and MPS is 0.943, which indicates that there is a strong positive relationship between EPS and MPS of EBL. Similarly, the Probable Error (P. Er) of this bank is 0.0332. Here, since r is more than 6.P.E. (r) i.e. (0.0332×6=0.1992), we can say that the correlation is significant.

## **4.4.2 Correlation and Regression Analysis between MPS and DPS**

**Table 4.13**

**Correlation and Regression Analysis between MPS and DPS**

<b>Banks</b>	<b>Regression Model</b>	<b>a</b>	<b>b</b>	<b>See</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>S.E.(r)</b>	<b>P.E(r)</b>	<b>Significance</b>
<b>HBL</b>	Y=a + bX	932.078	13.396	396.88	<b>0.428</b>	0.183	0.3654	0.2464	<b>Significant</b>
<b>EBL</b>		1377.738	-14.463	8984.971	0.183	0.034	0.4320	0.2914	<b>Significant</b>

*Source: Annex 5*

Table 4.13 contains the different indicators helpful to analyze the simple correlation and regression between DPS and MPS of observed 2 joint ventures banks. Where DPS is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

### **HBL**

The regression constant or intercept coefficient (a) is 932.078, which shows that the average MPS would be Rs. 932.078 if the DPS were zero. The result shows that the slope of the regression line (b) is 13.396, which indicates that positive correlation exists between DPS and MPS of HBL. One rupee increases in DPS causes Rs. 13.396 increase in MPS of the bank. The estimation of MPS may vary by Rs. 0.3654 as the standard error of the model for HBL. The coefficient for determination ( $r^2$ ) is 0.183, which indicates that 18.3% of the variation in MPS is affected or determined by the explanatory variable DPS. The simple correlation coefficient (r) between DPS and MPS is 0.428, which indicates that there is a strong positive relationship between DPS and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.2464. It is used to find out the significance of the obtained values. Here, since r is less than 6.P.E. (r) i.e.

( $0.2464 \times 6 = 1.4784$ ), we can say that the value of r is insignificant.

### **EBL**

The regression constant or intercept coefficient (a) is 1377.73, which shows that the average MPS would be Rs. 1377.73 if the DPS were zero. The result shows that the slope of the regression line (b) is -14.463, which indicates that positive correlation exists between DPS and MPS of EBL. One rupee increases in DPS causes Rs. 14.463 decrease in MPS of the bank. The coefficient of determination ( $r^2$ ) is 0.034, which indicates that 3.4% of the variation in MPS is affected or determined by the explanatory variable DPS. The simple correlation coefficient (r) between DPS and MPS is 0.183, which indicates that there is a strong positive relationship between DPS and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.2914. Since r is less than 6.P.E. (r) i.e. ( $0.2914 \times 6 = 1.7484$ ), we can say that the value of r is insignificant.

#### 4.4.3 Correlation and Regression Analysis between MPS and Dividend Yield

Table 4.14

##### Correlation and Regression Analysis between MPS and Dividend Yield

Banks	Regression Model	a	b	SEe	r	r <sup>2</sup>	S.E.(r)	P.R(r)	Significance/Insignificant
<b>HBL</b>	Y=a + bX	1014.864	72.192	429.548	0.208	0.043	0.428	0.2887	<b>Significant</b>
<b>EBL</b>		1660.342	71.490	715.891	0.618	0.382	0.2764	0.1864	<b>Significant</b>

Source: Annex 6

Table 4.14 contains the different indicators helpful to analyze the simple correlation and regression between Dividend Yield and MPS of observed 2 joint venture banks. Where Dividend Yield is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

#### **HBL**

The regression constant or intercept coefficient (a) is 1014.864, which shows that the average MPS would be Rs. 1014.864 if the DY were zero. The result shows that the slope of the regression line (b) is 72.192, which indicates that positive correlation exists between DY and MPS of HBL. One rupee increases in DY causes Rs. 72.192 increase in MPS of the bank. The estimation of MPS may vary by Rs. 0.428 as the standard error of the model for HBL. The coefficient of determination (r<sup>2</sup>) is 0.043, which indicates that 4.3% of the variation in MPS is affected or determined by the explanatory variable DY. The simple correlation coefficient (r) between DY and MPS is 0.208, which indicates that there is a strong positive relationship between DY and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.2887. It is used to find out the significance of the obtained values. Here, since r is less than 6.P.E. (r) i.e. (0.2887×6=1.7322), we can say that the value of r is insignificant.

## EBL

The regression constant or intercept coefficient (a) is 1660.342, which shows that the average MPS would be Rs. 1660.342 if the DY were zero. The result shows that the slope of the regression line 9b0 is -271.490, which indicates that negative correlation exists between DY and MPS of EBL. One rupee increases in DY causes Rs. 271.490 decrease in MPS of the bank. The coefficient of determination ( $r^2$ ) is 0.382, which indicates that 38.2% of the variation in MPS is affected or determined by the explanatory variable DY. The simple correlation coefficient (r) between DY and MPS is 0.618, which indicates that there is a strong positive relationship between DY and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.1864. Here, since r is less than 6.P.E. (r) i.e. ( $0.1864 \times 6 = 1.1184$ ), we can say that the correlation is insignificant.

### 4.4.4 Correlation and Regression Analysis between MPS and P/E Ratio

Table 4.15

Correlation and Regression Analysis between MPS and Price Earning Ratio

Banks	Regression Model	a	b	SEe	r	$r^2$	S.E.(r)	P.R(r)	Significant/Insignificant
HBL	Y=a + bX	-436.801	75.821	94.795	0.976	0.953	0.210	0.0142	Significant
EBL		-1064.687	112.569	127.878	0.990	0.980	0.0089	0.0060	Significant

Table 4.15 contains the different indicators helpful to analyze the simple correlation and regression between P/E ratio and MPS of observed 2 joint venture banks. Where P/E ratio is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:



### **HBL**

The regression constant or intercept coefficient (a) is -436.801, which shows that the average MPS would be Rs. -436.801 if the P/E were zero. The result shows that the slope of the regression line (b) is 75.821, which indicates that the positive correlation exists between P/E and MPS of HBL. One rupee increases in P/E causes Rs. 75.821 increase in MPS of the bank. The estimation of MPS may vary by Rs. 94.795 as the standard error of the model for HBL. The coefficient of determination ( $r^2$ ) is 0.953, which indicates that 95.3% of the variation in MPS is affected or determined by the explanatory variable P/E. The simple correlation coefficient (r) between P/E and MPS is 0.976, which indicates that there is a positive relationship between P/E and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.0142. It is used to find out the significance of the obtained values. Here, since r is more than 6.P.E. (r) i.e. ( $0.0142 \times 6 = 0.0852$ ), we can say that the correlation is significant.

### **EBL**

The regression constant or intercept coefficient (a) is -1064.687, which shows that the average MPS would be Rs. -1064.687 if the P/E were zero. The result shows that the slope of the regression line (b) is 112.569, which indicates that positive correlation exists between P/E and MPS of EBL. One rupee increase in P/E causes Rs. 112.569 increase in MPS of the bank. The coefficient of determination ( $r^2$ ) is 0.980, which indicates that 98% of the variation in MPS is affected or determined by the explanatory variable P/E. The simple correlation coefficient (r) between P/E and MPS is 0.990, which indicates that there is a positive relationship between P/E and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.0060. Here, since r is more than 6.P.E. (r) i.e. ( $0.0060 \times 6 = 0.0360$ ), we can say that the correlation is significant.

#### 4.4.5 Correlation and Regression Analysis between MPS and NWPS

**Table 4.16**

**Correlation and Regression Analysis between MPS and NWPS**

<b>Banks</b>	<b>Regression Model</b>	<b>a</b>	<b>b</b>	<b>SEe</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>S.E.(r)</b>	<b>P.R(r)</b>	<b>Signification /Insignificant</b>
<b>HBL</b>	<b>Y=a + bX</b>	-3298.725	17.861	344.991	0.619	0.383	0.2759	0.1861	<b>Significant</b>
<b>EBL</b>		-1718.649	13.687	274.308	0.954	0.909	0.0407	0.0274	<b>Significant</b>

*Source: Annex 8*

Table 4.16 contains the different indicators helpful to analyze the simple correlation and regression between NWPS ratio and MPS of observed 2 joint venture banks. Where NWPS ratio is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

#### **HBL**

The regression constant or intercept coefficient (a) is -3298.725, which shows that the average MPS would be Rs. -3298.725 if the NWPS were zero. The result shows that the slope of the regression line (b) is 17.861, which indicates that the positive correlation exists between NWPS and MPS of HBL. One rupee increases in NWPS causes Rs. 17.861 increase in MPS of the bank. The estimation of MPS may vary by Rs. 344.991 as the standard error of the model for HBL. The coefficient of determination (r<sup>2</sup>) is 0.383, which indicates that 38.3% of the variation in MPS is affected of determined by the explanatory variable NWPS. The simple correlation coefficient (r) between NWPS and MPS is 0.619, which indicates that there is a positive relationship between NWPS and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.1861. It is used to find out the significance of the obtained

values. Here, since  $r$  is less than 6.P.E. ( $r$ ) i.e.  $(0.1861 \times 6 = 1.1166)$ , we can say that the correlation is insignificant.

### EBL

The regression constant or intercept coefficient ( $a$ ) is -1718.649, which shows that the average MPS would be Rs. -1718.649 if the NWPS were zero. The result shows that the slope of the regression line ( $b$ ) is 13.687, which indicates that the positive correlation exists between NWPS and MPS of EBL. One rupee increases in NWPS causes Rs. 13.687 increase in MPS of the bank. The estimation of MPS may vary by Rs. 274.308 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.909, which indicates that 90.9% of the variation in MPS is affected of determined by the explanatory variable NWPS. The simple correlation coefficient ( $r$ ) between NWPS and MPS is 0.954, which indicates that there is a positive relationship between NWPS and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.0274. It is used to find out the significance of the obtained values. Here, since  $r$  is more than 6.P.E. ( $r$ ) i.e.  $(0.0274 \times 6 = 0.1644)$ , we can say that the correlation is significant.

#### 4.4.6 Correlation and Regression Analysis between MPS and CR

**Table 4.17**

**Correlation and Regression Analysis between MPS and Current Ratio**

Banks	Regressi on Model	a	b	SEe	r	r <sup>2</sup>	S.E.( r)	P.R( r)	Significatio n/Insignifica nt
HBL	Y=a + bX	- 12552.8 89	13140. 74	361.471	0.56 8	0.322	0.303 2	0.204 5	Significant
EBL		71677.2 131	- 66776. 923	236.517	0.96 6	0.933	0.030 0	0.020 2	Significant

Source: Annex 9

Table 4.17 contains the different indicators helpful to analyze the simple correlation and regression between C.R and MPS of observed 2 joint venture banks. Where C.R is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

### **HBL**

The regression constant or intercept coefficient (a) is -12552.889, which shows that the average MPS would be Rs. -12552.889 if the C.R were zero. The result shows that the slope of the regression line (b) is 13140.741, which indicates that the positive correlation exists between C.R and MPS of HBL. One rupee increases in NWPS causes Rs. 13140.741 increase in MPS of the bank. The estimation of MPS may vary by Rs. 361.471 as the standard error of the model for HBL. The coefficient of determination ( $r^2$ ) is 0.322, which indicates that 32.2% of the variation in MPS is affected of determined by the explanatory variable C.R. The simple correlation coefficient (r) between C.R and MPS is 0.568, which indicates that there is a positive relationship between C.R and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.2045. It is used to find out the significance of the obtained values. Here, since r is less than 6.P.E. (r) i.e. ( $0.2045 \times 6 = 1.2270$ ), we can say that the correlation is insignificant.

### **EBL**

The regression constant or intercept coefficient (a) is 71677.231, which shows that the average MPS would be Rs. 71677.231 if the C.R were zero. The result shows that the slope of the regression line (b) is -66776.923, which indicates that negative correlation exists between C.R and MPS of EBL. One rupee increases in C.R causes Rs. -66776.923 decrease in MPS of the bank. The estimation of MPS may vary by Rs. 236.517 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.933, which indicates that 93.3% of the variation in MPS is affected of determined by the explanatory variable C.R. The simple correlation coefficient (r) between C.R and MPS is 0.966, which indicates that there is a positive relationship between C.R and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.0202. It is used to find out the significance of the obtained values. Here, since r is

more than 6.P.E. (r) i.e.  $(0.0202 \times 6 = 0.1212)$ , we can say that the correlation is significant.

#### 4.4.7 Correlation and Regression Analysis between MPS and ROTA

**Table 4.18**  
**Correlation and Regression Analysis between MPS and ROTA**

Banks	Regression Model	a	b	SEe	r	r <sup>2</sup>	S.E.(r)	P.R(r)	Signification /Insignificant
HBL	Y=a + bX	-124.965	993.578	303.965	0.722	0.521	0.2142	0.1445	Significant
EBL		-1491.749	1902.833	860.868	0.325	0.106	0.3998	0.2697	Significant

*Source: Annex 10*

Table 4.18 contains the different indicators helpful to analyze the simple correlation and regression between ROTA and MPS of observed 2 joint venture banks. Where ROTA is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

#### **HBL**

The regression constant or intercept coefficient (a) is -124.965, which shows that the average MPS would be Rs. -124.965 if the ROTA were zero. The result shows that the slope of the regression line (b) is 993.578, which indicates that the positive correlation exists between ROTA and MPS of HBL. One rupee increases in ROTA causes Rs. 993.578 increase in MPS of the bank. The estimation of MPS may vary by Rs. 303.965 as the standard error of the model for HBL. The coefficient of determination (r<sup>2</sup>) is 0.521, which indicates that 52.1% of the variation in MPS is affected of determined by the explanatory variable ROTA. The simple correlation coefficient (r) between ROTA and MPS is 0.722, which indicates that there is a positive relationship between ROTA and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.1445. It is used to find out the significance of the obtained

values. Here, since  $r$  is less than 6.P.E. ( $r$ ) i.e.  $(0.1445 \times 6 = 0.8670)$ , we can say that the correlation is insignificant.

### **EBL**

The regression constant or intercept coefficient ( $a$ ) is -1491.749, which shows that the average MPS would be Rs. -1491.749 if the ROTA were zero. The result shows that the slope of the regression line ( $b$ ) is 1902.833, which indicates that positive correlation exists between ROTA and MPS of EBL. One rupee increases in ROTA causes Rs. 1902.833 increase in MPS of the bank. The estimation of MPS may vary by Rs. 860.868 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.106, which indicates that 10.6% of the variation in MPS is affected of determined by the explanatory variable ROTA. The simple correlation coefficient ( $r$ ) between ROTA and MPS is 0.325, which indicates that there is a positive relationship between ROTA and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.2697. It is used to find out the significance of the obtained values. Here, since  $r$  is less than 6.P.E. ( $r$ ) i.e.  $(0.2697 \times 6 = 1.6182)$ , we can say that the correlation is insignificant.

### **4.4.8 Correlation and Regression Analysis between MPS and ROE**

**Table 4.19**

**Correlation and Regression Analysis between MPS and ROE**

<b>Banks</b>	<b>Regression Model</b>	<b>a</b>	<b>b</b>	<b>SEe</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>S.E.(r)</b>	<b>P.R(r)</b>	<b>Significance/Insignificant</b>
<b>HBL</b>	Y=a + bX	-592.478	125.013	218.886	0.867	0.752	0.1109	0.0748	<b>Significant</b>
<b>EBL</b>		-726.111	79.429	890.568	0.208	0.43	0.2549	0.1719	<b>Significant</b>

*Source: Annex 11*

Table 4.19 contains the different indicators helpful to analyze the simple correlation and regression between ROE and MPS of observed 2 joint venture banks. Where

ROE is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

### **HBL**

The regression constant or intercept coefficient (a) is -592.478, which shows that the average MPS would be Rs. -592.478 if the ROE were zero. The result shows that the slope of the regression line (b) is 125.013, which indicates that the positive correlation exists between ROE and MPS of HBL. One rupee increases in ROE causes Rs. 125.013 increase in MPS of the bank. The estimation of MPS may vary by Rs. 218.886 as the standard error of the model for HBL. The coefficient of determination ( $r^2$ ) is 0.752, which indicates that 75.2% of the variation in MPS is affected of determined by the explanatory variable ROE. The simple correlation coefficient (r) between ROE and MPS is 0.867, which indicates that there is a positive relationship between ROE and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.0748. It is used to find out the significance of the obtained values. Here, since r is more than 6.P.E. (r) i.e. ( $0.0748 \times 6 = 0.4488$ ), we can say that the correlation is significant.

### **EBL**

The regression constant or intercept coefficient (a) is -726.111, which shows that the average MPS would be Rs. -726.111 if the ROE were zero. The result shows that the slope of the regression line (b) is 79.429, which indicates that positive correlation exists between ROE and MPS of EBL. One rupee increases in ROE causes Rs. 79.429 increase in MPS of the bank. The estimation of MPS may vary by Rs. 890.568 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.43, which indicates that 43% of the variation in MPS is affected of determined by the explanatory variable ROE. The simple correlation coefficient (r) between ROE and MPS is 0.208, which indicates that there is a positive relationship between ROE and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.1719. It is used to find out the significance of the obtained values. Here, since r is less than 6.P.E. (r) i.e. ( $0.1719 \times 6 = 1.0314$ ), we can say that the correlation is insignificant.

#### 4.4.9 Correlation and Regression Analysis between MPS and NI/TA

**Table 4.20**

**Correlation and Regression Analysis between MPS and NI/TA**

<b>Banks</b>	<b>Regression Model</b>	<b>a</b>	<b>b</b>	<b>SEe</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>S.E.(r)</b>	<b>P.R(r)</b>	<b>Signification /Insignificant</b>
<b>HBL</b>	$Y = a + bX$	-1214	34866.66	379.734	0.502	0.252	0.3345	0.2256	<b>Significant</b>
<b>EBL</b>		-7501.429	88064	324.085	0.934	0.873	0.0568	0.0383	<b>Significant</b>

*Source: Annex 12*

Table 4.20 contains the different indicators helpful to analyze the simple correlation and regression between NI/TA and MPS of observed 2 joint venture banks. Where NI/TA is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

#### **HBL**

The regression constant or intercept coefficient (a) is -1214, which shows that the average MPS would be Rs. -1214 if the NI/TA were zero. The result shows that the slope of the regression line (b) is 34866.66, which indicates that the positive correlation exists between NI/TA and MPS of HBL. One rupee increases in NI/TA causes Rs. 34866.66 increase in MPS of the bank. The estimation of MPS may vary by Rs. 379.734 as the standard error of the model for HBL. The coefficient of determination (r<sup>2</sup>) is 0.252, which indicates that 25.2% of the variation in MPS is affected of determined by the explanatory variable NI/TA. The simple correlation coefficient (r) between NI/TA and MPS is 0.502, which indicates that there is a positive relationship between NI/TA and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.2256. It is used to find out the significance of the obtained



values. Here, since  $r$  is less than 6.P.E. ( $r$ ) i.e.  $(0.2256 \times 6 = 1.3536)$ , we can say that the correlation is insignificant.

**EBL**

The regression constant or intercept coefficient ( $a$ ) is 7501.429, which shows that the average MPS would be Rs. 7501.429 if the NI/TA were zero. The result shows that the slope of the regression line ( $b$ ) is -88064, which indicates that highly negative correlation exists between NI/TA and MPS of EBL. One rupee increases in NI/TA causes Rs. -88064 decrease in MPS of the bank. The estimation of MPS may vary by Rs. 324.085 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.873, which indicates that 87.3% of the variation in MPS is affected of determined by the explanatory variable NI/TA. The simple correlation coefficient ( $r$ ) between NI/TA and MPS is 0.934, which indicates that there is a positive relationship between NI/TA and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.0383. It is used to find out the significance of the obtained values. Here, since  $r$  is more than 6.P.E. ( $r$ ) i.e.  $(0.0383 \times 6 = 0.2298)$ , we can say that the correlation is significant.

**4.4.10 Correlation and Regression Analysis between MPS and NI/FA**

**Table 4.21**

**Correlation and Regression Analysis between MPS and NI/FA**

<b>Banks</b>	<b>Regressi on Model</b>	<b>a</b>	<b>b</b>	<b>SEe</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>S.E.( r)</b>	<b>P.R( r)</b>	<b>Significatio n/Insignific ant</b>
<b>HBL</b>	Y=a + bX	2166.44 4	- 209.80 6	364.49 4	0.55 8	0.311	0.207 8	0.308 1	<b>Significant</b>
<b>EBL</b>		- 5033.34 7	913.05 2	230.50 0	0.96 7	0.936	0.028 6	0.019 3	<b>Significant</b>

*Source: Annex 13*

Table 4.21 contains the different indicators helpful to analyze the simple correlation and regression between NI/FA and MPS of observed 2 joint venture banks. Where

NI/FA is independent variable and MPS is the dependent variable. With the help of these indicators, we can come to the following conclusions:

### **HBL**

The regression constant or intercept coefficient (a) is 2166.444, which shows that the average MPS would be Rs. 2166.444 if the NI/FA were zero. The result shows that the slope of the regression line (b) is -209.806, which indicates that the negative correlation exists between NI/FA and MPS of HBL. One rupee increases in NI/FA causes Rs. - 209.806 decreases in MPS of the bank. The estimation of MPS may vary by Rs. 0.2078 as the standard error of the model for HBL. The coefficient of determination ( $r^2$ ) is 0.311, which indicates that 31.1% of the variation in MPS is affected of determined by the explanatory variable NI/FA. The simple correlation coefficient (r) between NI/FA and MPS is 0.558, which indicates that there is a positive relationship between NI/FA and MPS of HBL. Similarly, the Probable Error (P.Er) of this bank is 0.3081. It is used to find out the significance of the obtained values. Here, since r is less than 6.P.E. (r) i.e. ( $0.3081 \times 6 = 1.8486$ ), we can say that the correlation is insignificant.

### **EBL**

The regression constant or intercept coefficient (a) is -5033.347, which shows that the average MPS would be Rs. -5033.347 if the NI/FA were zero. The result shows that the slope of the regression line (b) is 913.052, which indicates that positive correlation exists between NI/FA and MPS of EBL. One rupee increases in NI/FA causes Rs. 913.052 increase in MPS of the bank. The estimation of MPS may vary by Rs. 230.500 as the standard error of the model for EBL. The coefficient of determination ( $r^2$ ) is 0.936, which indicates that 93.6% of the variation in MPS is affected of determined by the explanatory variable NI/FA. The simple correlation coefficient (r) between NI/FA and MPS is 0.967, which indicates that there is a positive relationship between NI/FA and MPS of EBL. Similarly, the Probable Error (P.Er) of this bank is 0.0193. It is used to find out the significance of the obtained values. Here, since r is more than 6.P.E. (r) i.e. ( $0.0193 \times 6 = 0.1158$ ), we can say that the correlation is significant.

## 4.5 Multiple Regressions of MPS with Different Explanatory Variables

The MPS of the sampled commercial banks is especially determined by the use of statistical methods. In addition to it, the more appropriate method used herein is regression method. In order to get the clear vision of MPS of sampled commercial bank, a series of secondary data is used. The following table is the data abstracted and nonetheless, the data so abstracted reveals the MPS of sampled commercial banks in nation along with the other factors determining the MPS, like DPS, EPS, CR, ROTA, ROE, NI/FA, NI/TA, and P/E ratios. The variables so taken are based on the general hypothesis that the MPS is dependent upon a fore stated various factors. Various statistical analyses are stated below to show their interrelationship and dependency. The data table abstracted is given below: Use of SPSS program has been done herein to find the regression of the aforementioned data. Irrespective of the sampled banks the MPS is taken as a dependent variable and the rest has been taken as independent variables. Running the regression analysis has yields in the following output:

### Variables Entered/Removed

Model	Variable Entered	Variables Removed	Method
1	EPS,DPS,DY,ROTA,ROE,NI/FA,NI/TA,P/E	CR	Enter

### Model Summary

Mode	R	R Square	Adj. R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	Df1	Df2	Sig. F Change
1	0.986	0.980	0.975	9.70187	0.980	4088.272	8	1	.012

- a. Predictors: (Constant), EPS, DPS, DY, ROTA, ROE, NI/FA, NI/TA, P/E
- b. Dependent Variable: MPS

### Test for the Regression Model

Various test are performed to determine the statistical significance of the regression model obtained by the use of statistical tools and the computer program, SPSS, the test so performed are clearly stated below:

#### **4.6 Joint Hypothesis Test (F-Test)**

This test is also known as F-test. The F-test for overall significance is based on the fact that for the regression equation to be statistically significant, at least one of the regression parameter must not be zero. The hypothesis is generated as below:

**Null Hypothesis:**  $H_0: \beta_1 = \beta_2 = \beta_3 = 0$  [There is a link between Independent and Dependent Variables]

**Alternative Hypothesis:**  $H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq 0$  [There is no link between Independent and Dependent Variables]

From the table stated above,

We can get the value of F-statistics to be 4088.27,

Consulting the table for F-statistic, we get

F tabulated 8, 1 at 5% level of confidence = 239

Here, the relation can be stated as under:

F calculated > F tabulated Reject null hypothesis, i.e.

With 95% confidence level, it can be said that all the coefficient of the independent variables should not be simultaneously equal to zero. In other words, there is no link between independent and dependent variables.

#### **4.7 Partial Hypothesis Test (T-Test)**

Partial hypothesis, also known as T-Test, is the number of standard error contained in the regression coefficient. If an individual parameter is statistically significant, the true value of the parameter cannot be equal to zero. The hypothesis is generated as below:

**Null Hypothesis:**  $H_0:\beta_1 = 0$  [The Dependent Variables affect the Independent Variables]

**Alternative Hypothesis:**  $H_1:\beta_1 \neq 0$  [The Dependent Variables do not affect the Independent Variables]

Likewise, individual coefficients are taken into considerations and the hypothesis generation can be tabulated as below:

Variables	Hypothesis	T Calculated	T Tabulated
EPS	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	27.521	2.228
DPS	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	-11.268	2.228
DY	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	12.759	2.228
ROTA	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	-2.599	2.228
ROE	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	-1.677	2.228
NI/FA	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	1.932	2.228
NI/TA	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	2.102	2.228
P/E	$H_0:\beta_1=0$ $H_1:\beta_1 \neq 0$	55.110	2.228

The absolute value of T-statistics for EPS, DY and P/E are greater than 2.228 which implies that the coefficient are significant means the probability of incorrectly rejecting the hypothesis that they are equal to zero is less than or equal to 5%. The T-statistics for DPS, ROTA, ROE, NI/FA and NI/TA are less than 2.228 which imply that the coefficient is insignificant means there is more than 5% probability of erroneously rejecting the hypothesis that the coefficient is equal to zero.

## 4.8 Major Findings

- Among the two sample banks, the MPS of HBL and EBL are fluctuating in same Nature. As during the period of study, HBL has the lowest average closing MPS of Rs. 1540 then that of EBL with Rs. 2053.20. And a coefficient of variation of HBL is the lowest relative variation by 27.57%, whereas EBL has the high variation in MPS, signified by C.V of 31.28%.
- Among two sample banks, the average net worth per share of HBL is the highest and that of EBL is the lowest which is Rs. 247.50 and Rs. 270.75 respectively but the fluctuation in the net worth is highest in case of EBL and lowest in case of HBL which coefficient of variation is 26.11% and 5.4% respectively.
- The average EPS of the EBL is highest of Rs. 58.49 and HBL has the lowest EPS of Rs. 77.44 among these two banks. The highest fluctuation of the EPS is of EBL, the CV being 21.96%.
- Among these two sample banks, the average dividend per share (DPS) of EBL is the highest and that of HBL is the lowest which is Rs. 15 and Rs. 11.58 respectively, but the fluctuation in the DPS is highest in case of HBL which have C.V of 106.51% and the lowest in case of EBL which C.V is 50.92%.
- HBL has the highest average P/E Ratio of 20.1 on the other hand EBL has the lowest average P/E Ratio of 19.77. The standard deviation of EBL is the highest then that of HBL which is 6.94 and 4.89 respectively. And coefficient of variation in case of HBL is the lowest and EBL has the highest which is 24.36% and 35.08% respectively.
- The average Dividend Yield (DY) of EBL is the highest and that of HBL is the lowest which is Rs. 1.93 and Rs. 1.002 respectively but the fluctuation in the DY is highest in case of HBL which is 112.05% and the lowest in case of EBL which CV is 94.12%. EBL has the highest average C.R of Rs. 1.056. On the other hand HBL has the lowest average C.R, which is 1.03. Relatively highest variation of the C.R is of EBL, which C.V is 1.58% and the lowest of the C.R is of HBL that is 1.07%.

- Among these two banks, the average Return on Total Assets (ROTA) of EBL is the highest and that of HBL is the lowest which is Rs. 1.39 and Rs. 1.22 respectively. And coefficient of variation in case of HBL is the lowest and EBL has the highest which is 22.64% and 96.72% respectively.
- EBL has the highest average ROE of Rs. 23.76. On the other hand HBL has the lowest average ROE, which is 13.44. Relatively highest variation of the ROE is of HBL, which C.V is 19.69% and the lowest of the ROE is of EBL that is 8.68%.
- EBL has the highest average Fixed Assets Turnover of Rs. 6.78 and HBL has the lowest average of Rs. 3.32. On the other hand EBL has the lowest relative variation of 12.31% whereas HBL has the highest variation which is 21.12%.
- Among these banks, the Total Asset Turnover of EBL is the highest during the period of study that is Rs 0.07 and HBL has the lowest average return of Rs. 0.04. The relative variation of Total Assets Turnover is highest in EBL and lowest in HBL respectively, which CVs are 11.62% and 10.65% respectively.
- Analysis of the simple correlation and regression between EPS and MPS of two sampled joint venture banks shows that positive and significant correlation exists between EPS and MPS of both the banks EBL and HBL respectively.
- Analysis of the simple correlation and regression between DPS and MPS of two sampled joint venture banks shows that negative and insignificant correlation exists between DPS and MPS of both the banks EBL and HBL respectively.
- Analysis of the simple correlation and regression between DY and MPS of two sampled joint venture banks shows that negative and insignificant correlation exists between DY and MPS of both the banks EBL and HBL respectively.
- Analysis of the simple correlation and regression between P/E and MPS of two sampled joint venture banks shows that positive and significant correlation exists between P/E and MPS of both the banks EBL and HBL respectively.

- Analysis of the simple correlation and regression between NWPS and MPS of two sampled joint venture banks shows that positive and significant correlation exists between NWPS and MPS of EBL. Likewise, highly negative correlation exists between NWPS and MPS of HBL. Analysis of the simple correlation and regression between CR and MPS of two sampled joint venture banks shows that positive and significant correlation exists between DY and MPS of EBL. Likewise, highly negative correlation exists between CR and MPS of HBL.
- Analysis of the simple correlation and regression between ROTA and MPS of two sampled joint venture banks shows that negative and insignificant correlation exists between ROTA and MPS of both the banks EBL and HBL respectively.
- Analysis of simple correlation and regression between ROE and MPS of two banks shows that positive and significant correlation exists between ROE and MPS of HBL. Likewise, highly negative correlation exists between ROE and MPS of EBL.
- The Multiple Regression run in the thesis understudy suggest the following line of best fit: “MPS= -1782.367 + 30.146EPS – 14.734DPS + 142.473DY - 116.109ROTA - 2.479ROE + 9.467NI/FA + 2463.985NI/TA + 62.464P/E”
- The coefficient of each independent variable indicates the marginal relationship between that variable and the MPS of the sampled commercial banks, holding constant the effect of all other variables in the regression equation.
- The regression equation suggests that the MPS have positive relationship with EPS, DY, NI/FA, NI/TA and P/E. On the other hand, regression equation suggests that the MPS has negative relationship with DPS, ROTA and ROE.
- Joint Hypothesis Test (F- Test) for regression model suggest that, with 95% confidence level, it can be said that all the coefficient of the independent variables should not be simultaneously equal to zero. In other words, there is no link between independent and dependent variables.



- Partial Hypothesis Test (T-Test) for regression model suggests that: The variables EPS, DY and P/E are significant and the probability of incorrectly rejecting the hypothesis that they are equal to zero is less than or equal to 5%.
- The variables DPS, ROTA, ROE, NI/FA and NI/TA are insignificant means there is more than 5% probability of incorrectly rejecting the hypothesis that the coefficient is equal to zero.
- It is inferred that the financial performance do affect the share price of the sampled commercial banks. However, the extent of such effect is not to the mark.
- On the basis of aforementioned analysis, it can be inferred that the most affected commercial bank amidst the sample selected is HBL.
- It is found essential that the investors are to be educated further to analyze the financial performances and its impact on the market price.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter consists of summary, conclusion and recommendation. After completion of analysis chapter one should have to enlist his/her finding and should make necessary suggestions on the basis of the study. The entire study has no meaning until and unless the researcher summarizes, concludes and provides his/her recommendation in the respective field.

#### **5.1 Summary**

The Nepalese economy is dominated by agricultural sector. Economic status of Nepal is not satisfactory. So, speedy development of the country is possible when it reinforces in upgrading its economic condition. The major problem of an underdeveloped economy is an inadequate degree of capital formation, which is the result of insufficient saving made by the community. The financial sector should be capable to push the economic status of the country. Mobilization of fund in to different profitable and development sector is possible only with the development of competent financial institutions in the country. Commercial banks are the most important financial institutions which accept deposits from general public and mobilize that fund in form of loan and advance and other investment. An efficient banking system plays an important role for resource mobilization and development of the country. Banks are the medium through which scattered saving transferred into productive areas that ultimately helps the economic development and industrialization of nation. In the modern economy, one cannot imagine trade and business in absence of a bank. In order to collect the scattered saving and put them into productive channels, financial institutions like banks are necessity. Banks are the most important financial institution in an economy. They represent an effective medium for mobilization of financial resources. For the economic development, they create the strong and efficient market for capital. In the context of Nepal, the financial system is

dominated by the banking system in which commercial banks constitute an important part. Securities market in recent years has become an integral part of economic development. Examples from the developed countries have proved that “securities market is the cause and economic development is the effect”. Securities market serves as a direct link between the suppliers and users of capital fund. It channelizes the hoarded saving of general public towards the productive investments. Therefore, a healthy and efficient securities market is essential for the economic development. Nepalese securities market is small in size as compared to developed securities markets. Its competitive position in the global market is very poor. One of the prominent reasons behind its slow growth is lack of research and development. Pertinent studies on Nepalese securities market are still lacking. Furthermore, the country’s macro economic status and its dependency on the agri-output phenomenon is also one of the vital reasons. In absence of things stated ahead, the policy making body has been suffering the lack of information inputs. This study mainly aims to examine the financial performance of the company and its relationship with stock price in making decision about investment on securities of the listed commercial joint venture banks. The specific objectives of this study are (1) to analyze the financial performance of Himalayan Bank Limited and Everest Bank Limited; (2) to examine effect of financial performance on share price of Himalayan Bank Limited and Everest Bank Limited and; (3) to provide appropriate suggestions based on the major findings. Although many studies are already conducted in Nepal to examine the performance of a company or some companies, this study is based on small sample and examines the performance of sampled listed commercial banks whose financial statements are available. Besides, the study on financial performance of the company and its relationship with stock price is perhaps the first in Nepal. The data taken for the study is of secondary nature. The required secondary data are collected mainly from the annual reports of listed companies and the web-page of NEPSE: [www.nepalstock.com](http://www.nepalstock.com).

The other sources of secondary data are the various publications of securities Board, Nepal; Nepal Stock Exchange Limited and Nepal Rastra Bank. Among the 25

commercial banks, only two banks namely HBL and EBL have been taken as the sampled commercial banks to analyze the financial performance and their effect on share price.

Various statistical and financial analyses have been performed to satisfy the aforementioned objectives. Individual financial performance reflectors as MPS, EPS, DPS, DY, CR, ROTA, NWPS, ROE, NI/FA, NI/TA, P/E, etc have been analyzed. Similarly, simple regression amongst the individual explanatory variables has also been incorporated in the paper understudy accompanied by multiple regressions along with the relevant hypothesis testing. In short, the paper understudy analyzes the MPS of the captioned commercial banks and its relationship with different indicators.

## **5.2 Conclusion**

The shares of commercial banks of Nepal are heavily traded in the stock market and therefore, these shares play a key role in determination of stock exchange indicators. This study tries getting the empirical result of the investment on shares of the commercial banks. From the analysis it is found that common stock of sample banks are dependent mainly on the financial performance. However, the analyses are not exactly reflected in the share price. This may be due to lack of analysis in the movement and relationship of the MPS with reference to various variables. It can be inferred that the investors are still investing in the shares based on the rumor rather than financing on a realistic picture. The regression analysis suggests that EPS, DY, NI/FA, NI/TA and P/E are some of the prominent financial indicators which hold positive relationship with the share prices of the sampled banks. Likely, the indicators as DPS, ROTA and ROE hold negative relationship. It can be concluded that the share investors herein Nepal do not care much about the Dividend Yield. Since the total returns signifies the accumulation of dividend yield and capital gain yield. It can be inferred that the investors of commercial banks focus mainly in the capital gain yield rather than dividend declaration of the sampled commercial banks. However, the line of best fit also states that there are problems of correlation and such implies that the investment in sampled banks do not have overall analytical and informative assessment before the investment are made. The analysis further depicts that the share

price of the sampled commercial banks do shows the impact caused by their financial performance. However, the extent of such impact is not to the mark. The concluding remark is that investing in shares of commercial bank is risky in the sense that the fluctuation is seen in the dividend declaration and the MPS of the shares of the sampled commercial banks. Both these scenarios shall reduce the return on investment. Though lots of investors are attracted in trading these stocks, shares of banking sector has a key role in fluctuation of stock exchange index. The results of this study shows investment in common stock of sampled commercial banks lack analytical ability and the assessment of the financial performance is yet short in the investors. Last but not the least, efficient market hypothesis and true analysis are some of the key areas that the Nepalese investors are to think about.

### **5.3. Recommendations**

The recommendation is based on the empirical findings of the study and observation of the MPS of sampled commercial banks and the empirical view of its impact by the financial performance. The following recommendations are made:

It is recommended to carry out further research study on financial performance and its impact in the stock price furthermore to educate the investors regarding the relevancy of financial performance. There is a crying need of a separate body made up of financial experts and chartist to provide financial suggestions to public investors.

- The regulatory bodies are recommended to make effective control mechanism to stop excessive price fluctuation in the stock market. Furthermore, the regulatory bodies are also recommended to publish disclosure notice addressing the potential investors for proper information flow.
- Investors are recommended not to invest too much, too fast without doing the necessary study and preparation on acquiring the essential methods and skills of investment.
- Before making investment decisions in securities, it is recommended to analyze the following technical indicators:
  - Financial Performance of the companies.
  - Volume of Trading.

- Analytical review of the securities.
- Analysis of market information.
- Assessment of quality of loan assets prevalent in the concerned banks.
- Estimation techniques to forecast the most likely market share price.
- There is a limit to what can realistically be paid for the common stock. The investors are recommended to determine a value of share based on the fundamental earnings, dividend position and risks inherent in the company.

### **Future scope**

Banks are the most important financial institution in an economic. For the economic development they create the strong and efficient market for capital. In the context to Nepal, the financial system is dominated by the banking system, in which commercial bank constitute an important part. The shareholders and financial institutions may also be benefited from this study. This study will support the future researched by providing valuable information, the banking and insurance sector plays vital role for socio-economic development in the nation, dividend policy of these sector is needed so for as possible. Relationship regarding the financial performance of the institution and the movement of their share prices ultimately help them to make rational decision of their investment.

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**ANNEX-1**

**Correlation Coefficient and Regression between MPS and EPS**

	<b>HBL</b>					<b>EBL</b>				
Year	EPS (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	EPS (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05	47.9 1	920	2445.30	698896	41340.20	54.22	870	894.01	1980 25	13305.50
2005-06	59.2 4	1100	2405.90	705600	41202.00	62.78	1379	2077.5 4	4624 00	30994.40
2006-07	60.6 6	1740	2295.36	846400	44077.20	91.82	2430	2939.8 1	7569 00	47171.40
2007-08	62.7 4	1980	3509.38	1210000	5924.00	99.99	3132	3943.8 4	1901 641	86601.20
2008-09	61.9 0	1780	3679.64	3027600	105548.4 0	77.44	2455	6146.5 6	5904 900	190512
<b>Total</b>	<b>292. 45</b>	<b>752 0</b>	<b>11890.2 8</b>	<b>648849 6</b>	<b>238091.8 0</b>	<b>386. 25</b>	<b>1026 6</b>	<b>16001. 76</b>	<b>9223 866</b>	<b>368584. 50</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						1502			2053.2	
Mean ( $\bar{X}$ )						58.49			77.44	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.833			0.943	
Coefficient of Determinations ( $r^2$ )						0.695			0.890	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.1364			0.0492	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.0920			0.0332	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						51.522			40.867	
$A = \bar{Y} - b.\bar{X}$						-1656.97			-1053.367	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a.\Sigma Y - b.\Sigma XY}{n-2}}$						242.64			302.607	

**ANNEX-2**

**Correlation Coefficient and Regression between DPS and MPS**

Year	<b>HBL</b>					<b>EBL</b>					
	DPS (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	DPS (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	
2004-05	1.32	920	1.74	698896	1103.52	20	870	400	198025	8900	
2005-06	0	1100	0	705600	0	20	1379	400	462400	13600	
2006-07	11.58	1740	134.11	846400	10653.60	0	2430	0	756900	0	
2007-08	30	1980	900	1210000	33000	25	3132	625	1901641	34475	
2008-09	15	1780	225	3027600	26100	10	2455	100	5904900	24300	
<b>Total</b>	<b>57.9</b>	<b>7520</b>	<b>1260.85</b>	<b>6488496</b>	<b>70857.12</b>	<b>75</b>	<b>10266</b>	<b>1525</b>	<b>9223866</b>	<b>81275</b>	
						<b>HBL</b>			<b>EBL</b>		
Mean ( $\bar{Y}$ )						1504			2053.2		
Mean ( $\bar{X}$ )						11.58			15		
The Correlation Coefficient (r) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.428			0.183		
Coefficient of Determinations (r <sup>2</sup> )						0.183			0.034		
Standard Error of Correlation Coefficient S.E. (r) = $\frac{1-r^2}{\sqrt{N}}$						0.3654			0.4320		
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.2464			0.2914		
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						13.396			-14.463		
$A = \bar{Y} - b \cdot \bar{X}$						932.078			1377.738		
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a \cdot \Sigma Y - b \cdot \Sigma XY}{n-2}}$						396.88			894.971		

**ANNEX-3**

**Correlation Coefficient and Regression between MPS and DY**

Year	<b>HBL</b>					<b>EBL</b>					
	DY (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	DY (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	
2004-05	0.16	920	0.0256	698896	133.76	4.49	870	20.16	198025	1998.05	
2005-06	0	1100	0	705600	0	2.94	1379	8.64	462400	1999.20	
2006-07	1.26	1740	1.5876	846400	1159.20	0	2430	0	756900	0	
2007-08	2.73	1980	7.4529	1210000	3003	1.81	3132	3.28	1901641	2495.99	
2008-09	0.86	1780	0.7396	3027600	1496.40	0.41	2455	0.17	5904900	996.30	
<b>Total</b>	<b>5.01</b>	<b>7520</b>	<b>9.8057</b>		<b>5795.36</b>	<b>9.65</b>	<b>10266</b>	<b>32.25</b>	<b>9223866</b>	<b>7489.54</b>	
						<b>HBL</b>			<b>EBL</b>		
Mean ( $\bar{Y}$ )						1504			2053.2		
Mean ( $\bar{X}$ )						1.002			1.93		
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.208			0.618		
Coefficient of Determinations ( $r^2$ )						0.043			0.328		
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.4280			0.2764		
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.2887			0.1864		
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						72.192			-271.490		
$A = \bar{Y} - b.\bar{X}$						1014.864			1660.342		
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a.\Sigma Y - b.\Sigma XY}{n-2}}$						429.548			715.891		

**ANNEX-4**

Correlation Coefficient and Regression between P\E and EPS

Year	HBL					EBL					
	P/E (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	P/E (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	
2004-05	16.9 1	920	285.95	698896	14136.76	14.88	870	221.41	198 025	6621. 60	
2005-06	17.1 3	1100	293.44	705600	14389.20	14.92	1379	222.61	462 400	1014 5.60	
2006-07	19.2	1740	368.64	846400	17664.00	16.05	2430	257.60	756 900	1396 3.50	
2007-08	18.5 7	1980	344.84	1210000	20427.00	22	3132	484	190 164 1	3033 8	
2008-09	28.6 9	1780	823.12	3027600	49920.60	31	2455	961	590 490 0	7533 0	
<b>Total</b>		<b>752 0</b>	<b>2115.12</b>	<b>648849 6</b>	<b>116537.5 0</b>	<b>98.8 5</b>	<b>1026 6</b>	<b>2146.6 2</b>	<b>922 386 6</b>	<b>1363 98.7</b>	
						<b>HBL</b>			<b>EBL</b>		
Mean ( $\bar{Y}$ )						1504			2053.2		
Mean ( $\bar{X}$ )						20.1			19.77		
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.976			0.990		
Coefficient of Determinations ( $r^2$ )						0.953			0.980		
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.0210			0.0089		
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.0142			0.0060		
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						75.821			112.569		
$A = \bar{Y} - b.\bar{X}$						-436.801			-1064.687		
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a.\Sigma Y - b.\Sigma XY}{n-2}}$						94.795			127.878		

**ANNEX-5**

**Correlation Coefficient and Regression between NWP and MVP**

Year	<b>HBL</b>					<b>EBL</b>					
	NWP S (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	NWP S (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	
2004-05	239.59	920	61414.75	698896	207177.52	219.83	870	22530.01	198025	66794.50	
2005-06	228.72	1100	60974.42	705600	207421.20	217.67	1379	29419.11	462400	116633.60	
2006-07	264.74	1740	57403.37	846400	220422.80	280.82	2430	32815.32	756900	191286.90	
2007-08	247.95	1980	52312.84	1210000	251592	321.77	3132	47380.23	1901641	300166.93	
2008-09	256.52	1780	70087.27	3027600	460647.60	313.64	2455	85690.85	5904900	711333.90	
<b>Total</b>	<b>1237.52</b>	<b>7520</b>	<b>302192.65</b>	<b>6488496</b>	<b>1347255.12</b>	<b>1353.75</b>	<b>10266</b>	<b>217835.52</b>	<b>9223866</b>	<b>1386215.83</b>	
						<b>HBL</b>			<b>EBL</b>		
Mean ( $\bar{Y}$ )						1504			2053.2		
Mean ( $\bar{X}$ )						247.50			270.75		
The Correlation Coefficient (r) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.619			0.954		
Coefficient of Determinations (r <sup>2</sup> )						0.383			0.909		
Standard Error of Correlation Coefficient S.E. (r) = $\frac{1-r^2}{\sqrt{N}}$						0.2759			0.0407		
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.1861			0.0274		
B = $\frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						17.861			13.687		
A = $\bar{Y} - b.\bar{X}$						-3298.725			-1718.649		
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a.\Sigma Y - b.\Sigma XY}{n-2}}$						344.991			274.308		

**ANNEX-6**

**Correlation Coefficient and Regression between NI/T and MVP**

Year	HBL					EBL				
	NI/T A (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	NI/T A (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05	0.06	920	0.0036	698896	26.70	0.08	870	0.0064	198 025	26.70
2005-06	0.07	1100	0.0049	705600	47.60	0.08	1379	0.0064	462 400	47.60
2006-07	0.06	1740	0.0036	846400	52.20	0.07	2430	0.0049	756 900	52.20
2007-08	0.07	1980	0.0049	1210000	96.53	0.07	3132	0.0049	190 164 1	96.53
2008-09	0.07	1780	0.0049	3027600	170.10	0.06	2455	0.0036	590 490 0	170.1 0
<b>Total</b>	<b>0.33</b>	<b>752 0</b>	<b>0.0219</b>	<b>648849 6</b>	<b>393.13</b>	<b>0.36</b>	<b>1026 6</b>	<b>0.0262</b>	<b>922 386 6</b>	<b>393. 13</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						1504			2053.2	
Mean ( $\bar{X}$ )						0.0660			0.0720	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.502			0.934	
Coefficient of Determinations ( $r^2$ )						0.252			0.873	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.3345			0.0568	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.2256			0.0383	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						34866.667			-88064	
$A = \bar{Y} - b.\bar{X}$						-1214			7501.429	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a.\Sigma Y - b.\Sigma XY}{n-2}}$						379.734			324.085	

**ANNEX-7**

Correlation Coefficient and Regression between NI/ and MVP

Year	HBL					EBL				
	NI/F A (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	NI/F A (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05		920	40.07	698896	5291.88		870	33.76	198025	2585.45
2005-06		1100	25.70	705600	4258.80		1379	43.96	462400	4508.40
2006-07		1740	35.40	846400	5474		2430	41.09	756900	5576.70
2007-08		1980	15.05	1210000	4268		3132	49.14	190164	9666.74
2008-09		1780	20.16	3027600	7812.60		2455	64.96	590490	19585.80
<b>Total</b>		<b>7520</b>	<b>136.16</b>		<b>27105.28</b>		<b>10266</b>	<b>232.91</b>	<b>922386</b>	<b>41923.09</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						1087.2			1160.8	
Mean ( $\bar{X}$ )						5.1440			6.7840	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.558			0.967	
Coefficient of Determinations ( $r^2$ )						0.311			0.936	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.3081			0.0286	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.2078			0.0193	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						-209.806			913.052	
$A = \bar{Y} - b \cdot \bar{X}$						2166.444			-5033.347	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a \cdot \Sigma Y - b \cdot \Sigma XY}{n-2}}$						364.494			230.500	



**ANNEX-8**

**Correlation Coefficient and Regression between CR and MVP**

Year	<b>HBL</b>					<b>EBL</b>				
	CR (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	CR (X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05	1.01	920	1.0201	698896	844.36	1.07	870	1.1449	198025	476.15
2005-06	1.04	1100	1.0816	705600	873.60	1.06	1379	1.1239	462400	720.80
2006-07	1.04	1740	1.0816	846400	956.80	1.06	2430	1.1239	756900	922.20
2007-08	1.05	1980	1.1025	1210000	1155	1.05	3132	1.1025	190164	1447.95
2008-09	1.05	1780	1.1025	3027600	1827	1.04	2455	1.0816	590490	2527.20
<b>Total</b>	<b>5.19</b>	<b>7520</b>	<b>5.3883</b>	<b>6488496</b>	<b>5656.76</b>	<b>15.28</b>	<b>10266</b>	<b>5.5765</b>	<b>9223866</b>	<b>6094.30</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						15.4			2053.2	
Mean ( $\bar{X}$ )						1.038			1.056	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.568			0.966	
Coefficient of Determinations ( $r^2$ )						0.322			0.933	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.3032			0.0300	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.2045			0.0202	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						13140.741			-66776.923	
$A = \bar{Y} - b \cdot \bar{X}$						-12552.889			71677.231	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a \cdot \Sigma Y - b \cdot \Sigma XY}{n-2}}$						361.471			236.517	

**ANNEX-9**

**Correlation Coefficient and Regression between ROTA and MVP**

Year	HBL					EBL				
	ROTA (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	ROT A(X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05	0.91	920	0.8281	698896	760.76	1.17	870	1.3689	198025	520.65
2005-06	1.06	1100	1.1236	705600	890.40	1.50	1379	2.25	462400	1020
2006-07	1.11	1740	1.2321	846400	1021.20	1.40	2430	1.96	756900	1218
2007-08	1.55	1980	2.4025	1210000	1705	1.50	3132	2.25	1901641	2068.50
2008-09	1.47	1780	2.1609	3027600	2557.80	1.40	2455	1.96	5904900	3402
<b>Total</b>	<b>6.1</b>	<b>7520</b>	<b>7.7472</b>	<b>6488496</b>	<b>6935.16</b>	<b>6.97</b>	<b>10266</b>	<b>9.7889</b>	<b>9223866</b>	<b>8229.15</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						15.4			2053.2	
Mean ( $\bar{X}$ )						1.22			1.394	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.722			0.325	
Coefficient of Determinations ( $r^2$ )						0.521			0.106	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.2142			0.3998	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.1445			0.2697	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						993.578			1902.833	
$A = \bar{Y} - b \cdot \bar{X}$						-124.965			-1491.749	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a \cdot \Sigma Y - b \cdot \Sigma XY}{n-2}}$						303.965			860.868	

**ANNEX-10**

**Correlation Coefficient and Regression between ROE and MVP**

Year	HBL					EBL				
	ROE (X)	MVP S	X <sup>2</sup>	Y <sup>2</sup>	XY	ROE(X)	MPS (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004-05	11.13	920	123.88	698896	9304.68	26.18	870	685.39	198025	11650.10
2005-06	11.48	1100	131.79	705600	9643.20	21.10	1379	445.21	462400	14348.0
2006-07	12	1740	144	846400	11040	22.19	2430	492.39	756900	19305.30
2007-08	15.58	1980	242.74	1210000	17138	24.64	3132	607.13	1901641	33978.56
2008-09	16.75	1780	280.56	3027600	29145	24.67	2455	608.61	5904900	59948.10
<b>Total</b>	<b>66.94</b>	<b>7520</b>	<b>922.97</b>	<b>6488496</b>	<b>76270.88</b>	<b>118.78</b>	<b>10266</b>	<b>2838.73</b>	<b>9223866</b>	<b>139230.06</b>
						<b>HBL</b>			<b>EBL</b>	
Mean ( $\bar{Y}$ )						15.4			2053.2	
Mean ( $\bar{X}$ )						13.4360			23.7560	
The Correlation Coefficient ( $r$ ) = $\frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - \Sigma X^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$						0.867			0.208	
Coefficient of Determinations ( $r^2$ )						0.752			0.43	
Standard Error of Correlation Coefficient S.E. ( $r$ ) = $\frac{1-r^2}{\sqrt{N}}$						0.1109			0.2549	
Probable Error (P.E.) = $\frac{1-r^2}{\sqrt{N}} \times 0.6745$						0.748			0.1719	
$B = \frac{n\Sigma xy - \Sigma x \Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$						125.013			79.429	
$A = \bar{Y} - b \cdot \bar{X}$						-592.478			-726.111	
Standard Error of Estimate (See) = $\sqrt{\frac{\Sigma Y^2 - a \cdot \Sigma Y - b \cdot \Sigma XY}{n-2}}$						218.886				

