

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Development of the country depends upon the economic development and for this banks and other financial institution play vital role. Bank is resource mobilizing institution which mobilizes idle scattered resources in productive sectors and there by earns reasonable profit. The concept of banking has been developed from the ancient history with the effort of ancient Gold Smiths who developed the practices of storing peoples' gold and valuables for safe keeping. Nowadays, banks are those financial institutions that mainly deal with financial activities of trade, commerce, industry, agriculture etc. They have gained Paramount trust in the public. Banks render a wide range of services to the different strata of society.

Capital market plays a vital role in economic sector. Capital market is the general barometer that measures the proper collection and canalization of saving for investment in productive and income generation assets. Capital market is the market place through which the entrepreneurs collect the long term capital by mobilizing individual saving either directly or indirectly. In Nepal, the capital market is still small, emerging and disorganized. There could not generate profit by Nepalese company that are both established and operated on public sector or private sector.

In Nepal, banking activities were started after the establishment of Nepal Bank Ltd. in 1937 AD. It performed as a Central Bank until Nepal Rastra Bank was established in 1956 AD to regulate the banking activities and monetary policy of the nation. Before 1980, only government sector

banks i.e. NBL and RBB operated as commercial banks. When government adopted policy of the globalization and liberalization, several financial institutions were established to mobilize scattered funds in the economy. Since then, many private commercial banks and joint venture banks are established. The first joint venture bank, NABIL was established in 1984 AD. Joint venture banks are the modes of trading through partnership among nations and also a form of negotiation between various group of industries and traders to achieve mutual exchange of goods and services of sharing competitive advantages. After the establishment of joint venture banks in Nepal, it has brought new hopes for productive mobilisation of funds. They are established to provide financial and other services primarily to commercial sector and occasionally to industrial and agricultural sector. Especially they collect required capital through the issue of primary share and debenture. The purchasers are the owner of the banks by investing their funds on share with the hope of capital gain and dividend.

Corporate sector has shown new momentum by issuing different types of securities in capital market. Capital market is the market place through which the entrepreneurs collect the long term capital by mobilizing the individual and institutional savings either directly or indirectly. Investors purchase shares available in the capital market expecting two forms of future return; dividend and capital gain (*Pradhan and Adhikari, 2002:16*). So, if company pays out a portion of its earnings of shareholders in the form of dividend, shareholders benefit directly. But, instead of paying dividend, if the company retains the fund to exploit other growth opportunities, the shareholders can expect to benefit indirectly through future increase in the price of their stocks. Thus shareholders wealth can be increased either through dividend or capital gain.

The policy of any company, for the division of its net profit between dividend and retention is known as dividend policy. All the aspects and questions related to payment of dividend are contained in the dividend policy. The wealth maximization objective, in the long run can be achieved only by maintaining adequate funds for investment. Financing growth can be considered as a secondary objective of dividend policy. Therefore, the firm should forecast the future need for funds and should determine the amount of retained earnings available after payment of dividend (*Adhikari, 1999: 2*). But most of the shareholders prefer cash dividends because it is predictable than future gain in the form of capital gain (*Brealey and Myers, 1998: 417*).

Dividend policy affects the financial structure, the flow of fund, corporate liquidity and investors' attitude. It is one of the central decision areas related to policies seeking to maximize the value of firm's common stock. Therefore corporate dividend policy is not an easy, straightforward and simple job as many people conceive it (*Hackett: 1981*). Dividend policy is considered as a critical variable since it involves the controversy between dividend payment and retention of earnings so that it is a complex decision. Dividend policy has remained a source of controversy despite years of theoretical and empirical research including one aspect of dividend policy; that is linkage between dividend policy and stock price risk. Paying large dividend reduces risk and thus influences stock price (Gordon, 1943), and is proxy for future earnings (Baskin, 1989). A number of theoretical mechanisms have been suggested that cause dividend yield and payout ratio to vary inversely with common stock volatility. There are duration effects, rate of return effect, arbitrate pricing effect and information effect. However there is not yet one acceptable dividend policy.

In practice, company pays whole earnings as dividend at the beginning to create better image and existence in the financial market but latter it may change its policy and announce a certain percentage of dividend payout term (*Khatiwada, 2001:3*). The payment of dividend is at the discretions of the Board of Directors. Dividend may be paid in cash or as stock.

The trading price of the listed company in authorized or legal stock exchanges is market price of stock (MPS). It is that value of stock, which a firm obtains from the market. Market price of stock is affected by the dividend per share (DPS) and earning per share (EPS). If the EPS and DPS are high the MPS will also be high.

Generally dividend policy and MPS have positive correlation; if the company pays high dividend MPS increases and vice versa. But in some cases out of this interrelation, the price may remain constant or decrease too. MPS of stock usually fluctuates by the adequate information hence it information lack or flow is also vital in the analysis of MPS.

1.2 Focus of the Study

The study focuses on the evaluation of fluctuation in the price of common stock in capital market due to the dividend policies adopted by banks. This study aims to deal with how much the stock price is fluctuated with respect to changes in dividend policy. To study the volatility of stock price, related variable such as EPS, DPS, dividend payout ration (D/P ratio) and MPS will be analyzed separately or in combined form.

1. 3 Statement of Problem

Numerous studies have been conducted on the corporate dividend policies. However dividend policy has remained a crucial as well as a controversial area. One of the aspects of controversy in dividend policy is linkage between dividend policy and stock price volatility. Hence corporate dividend policy is not clearly understood by large segment of financial community.

In Nepal, firms have followed some kind of dividend policy but of course, with an ad-hoc trend. That is why 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 truth that many scholars have not been able to define simple and conducive relationship between dividend policy and market price of stock. Some experts believe to have positive relationship but others believe no relation at all (*Bhattarai, 2002*).

Investors are not found to be active and sufficiently conscious enough to safeguard their fundamental investment rights and their other powers to get timely information from companies (*Shrestha, 2000:5*). Investors in Nepal are investing in stocks without having effective analysis of company. Sometimes they invest their fund just by reading the prospectus availed by the issuing company (*Gautam, 2004*). So investment patters of investors have also been affecting the market price of stock. Stock price increase with announcement of dividend although the firm announcing dividend might be under capitalized (*Bhattarai, 2002*)

There are few companies paying dividends to shareholders. Some companies have paid high dividend even though they have low stock price and some companies have high stock price though they have not paid

dividends constantly. Therefore following problems are dealt with in this study.

1. What is the dividend policy of Nepalese commercial banks?
2. How does dividend policy affect share price?

1. 4 Objectives of the Study

The major objective of the study is to assess the effect of dividend policy on share price determination. The specific objectives are as follows.

1. To explore the dividend policy followed by Nepalese commercial banks.
2. To analyse the relationship between dividend policy and share price.
3. To explore the factors affecting market price of share.

1.5 Significance of the Study

Dividend is the most inspiring aspect for the investment on shares of corporations. Generally dividends make temp investors to invest in a particular company's share. So dividend policy has a significant role in enhancing and maintaining the image of the companies.

In the context of Nepal, most of the companies have not adopted appropriate dividend policies due to the lack of appropriate knowledge and information regarding dividend policy. So they will be directly benefited from this study. Shareholders and investors may also be benefited from this study. Moreover this study will support the future researcher by providing valuable information. The significance of this study can be highlighted as follows.

1. This study will help investors and shareholders to know about the relationship between the dividend policy and share price.
2. It will be milestone for the management and policy maker to set and formulate suitable dividend policy.
3. It raises the public awareness about the relation between dividend policy and market price of share in order to help for making rational decision of their investment.

1.6 Limitation of the Study

1. The reliability of the statistical tools used and lack of experience is primary limitation of the research work.
2. The dividend used here has been referred only to the cash dividend.
3. Only five commercial banks are considered.
4. The data taken for study covers only the fiscal year 2000/01 to 2006/07.

CHAPTER- II

REVIEW OF LITERATURE

1. Conceptual Framework

Corporate dividend policy is not clearly understood by a large segment of the financial community. There is a misconception that dividend policy is a straight forward and simple aspect of finance as compared with the more technical areas such as taxation, liquidity management and cost accounting. However, dividend policy decision is a complex one having numerous implications for the firm. "During the last decades research efforts in this area have led to the development of valuation models seeking to establish the irrelevance of dividend payout on shareholders wealth. Moreover, a number of behavioural models have also come out in course of time, attempting to categorize, explain and measure different types of observed dividend behaviour. (*Mahapatra and Sahu, 1993:1*)

The policy of a company on the division of its profit between distribution to shareholders as dividend and retention for its investment is known as dividend policy. There is a reciprocal relationship between retained earnings and cash dividends. If retained earnings are kept more by the company less will be dividend and vice versa. The third major division of a company is the distribution of cash to its stockholders. It is in the sense that the firm has to choose between distributing profits to shareholders and ploughing them back into the business. The firm will use the net profit for paying dividend to the shareholders, if the payment will lead to maximization of the wealth of the owners. If not, it is better to retain them to finance investment programmes. (*Adhikari, 1999:12*)

Most of the shareholders expect two forms of return while purchasing the common stock. There may be capital gain and dividends. Capital gain can be defined as the profit resulting from the sale of common stock. The shareholders either expect an increase in the market value of the common stock overtime or a distribution of the firm's earnings in the form of a dividend. Thus shareholders expectation can be fulfilled through either capital gain or dividends. So it is wise policy to maintain a balance between shareholders interest with that of corporate growth from internally generated funds. The funds that could not be used due to lack of investment opportunities should be better paid as dividends, since shareholders have investment opportunities to employ elsewhere.

Dividends therefore refer to that of portion of a firm's net earning which are paid out to the shareholders (*Khan and Jain, 1992:543*). Generally dividends are paid out in terms of cash. Therefore it reduces the cash balance of the company. So dividend policy affects the financial structure, the flow of fund, corporate liquidity and investors' attitude. Therefore dividend policy is one of the critical decisions related to maximize the value of firm's common stock.

1.1. Commercial Bank

Commercial banks are considered as the base pillar of economic development of any nation. Especially in the least developed countries as well as under developed countries, the operation of commercial banks records the economic pulses of the economy.

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 in equity in general. After then, Rastryia Banijya Bank came in existence in

1977 as the second commercial bank but with 100% government ownership after 1980; many foreigner joint venture banks were introduced in Nepal. It could be possible only when government applied the financial liberalization policy. Since 1984 to 1997 nine foreign joint venture banks were established. Many of new banks registered to open even today (*Adhikari, 1999:14*).

A bank is a financial institution that trade money. It accepts deposits from the public i.e. fixed deposit, current account deposit and saving account deposit. The bank gives money in the form of loans and advances to person. It provides customer 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. therefore commercial banks are a financial institution that accepts the demand and time deposits from the business institution and individuals and engage in both business and customer lending. It uses funds raised from public deposits providing loans to different sectors with the prime objectives of profit maximization. Moreover commercial banks provides technical and administrative assistances to industries, trade and business persons. Commercial banks have played significance role in giving a direction in financing the requirement of trade and industry in the country.

1.2 Major Forms of Dividends

Many business corporations pay the different forms of dividend that depends upon the dividend policy of the corporation. Especially there are two major forms of dividends which are cash dividend and stock dividends.

1.2.1 Cash Dividends

Generally business corporations are paying the dividend in the form of cash and cash dividends are paid from the portion of earning to the investors in proportion of their shares of the company. Both the total assets and net

worth of the company are reduced when cash dividend is distributed. The market price per share drops in most cases by the amount of cash dividend distributed. The market price per share drops in most cases by the amount of cash dividend distributed. Regular cash dividend is usually paid quarterly but a few companies declare them monthly, semi annually or annually. The term regular merely indicates that the company expects that it will be able to maintain the payment in the future. If the company does not want to give that land of assurance, it usually declares both a regular and an extra dividend (*Bhattari, 2002:20*).

Paying a dividend reduces the amount the amount of retained earning shown on the firms balance sheet. However if all retained earnings are used up and if firm not adequate balance of has cash for the payment of cash dividend otherwise funds is to be borrowed for this purpose.

1.2.2 Stock Dividend and Stock Split

Dividends are not always in the form of cash. So stock dividend is the dividend in which the firm issues additional shares of its stockholders in proportion to the number of the shares held by the shareholders. "Stock dividend is a payment of additional shares of stock to shareholders often used in place of or in addition to cash dividend (*Van Horne, 2006:324*)."

Stock split is also a kind of stock dividend where company breaks (increase/decrease) share through splitting the par value of the share. With a stock split, the number of share is increased through a proportional reduction in the par value of stock. "For example, a 10 % stock dividend would mean that each ten shares is given own share of stock for every ten shares already owned. Under two-for one stock split, each share holders would be given one additional shares of stock for every share already owned, thus doubling the

number of share owned by each shareholders" (*Adhikari, 1999:14*). Split takes place in two ways.

1.2.2.1 Straight Stock Split

In the straight split company increase numbers of shares through a proportional reduction in the par value of stock. As a result of the stock split, the common stock split, the common stock, paid in capital and retained earnings account remain unchanged. Shareholders equity also stays the same (*Bhatarai, 2006:383*).

1.2.2.2 Reverse Stock Split

In the reverse stock split, company reduces number shares outstanding through merging the par value of the stock. Reverse split where the par value increase but the common stock, retained earnings, additional paid in capital remain unchanged.

In conclusion, with a stock dividend the par value is not reduced where as with split, it is. As a result, the common stock paid up capital and retained earnings accounts remain unchanged. Shareholders equity of course, also stays the same; the only change is in the par value of the stock. Except in accounting treatment, the stock dividend and stock split are very similar. A stock split however is usually reserved for occasion where a company wishes to achieve a substantial reduction in the market price per share (*Van Horne, 2006:325*).

1.3 The effect of stock dividend or a stock split can be summarised as follows

The issue of the stock dividend increases the number of the outstanding shares.

There is no change in the firm's assets or liabilities or in shareholders equity.

The issue of the stock dividend does not affect the stock holder's proportional ownership.

There is fall in per share earnings, book value and market price and an offsetting rise in the number of shares held by each shareholders.

A stock dividend or split does not change the assets of the firm. Since nothing is received by the firm for new share issued. In spite of the fact that stock dividend and stock split do not change the underlying assets, liabilities or equity of the firm (*Schall and Haley, 1991:448*). The effect of stock dividend or stock split can be summarized below (*Van Horne, 2006:326*)

1.3.1 Effect on Cash Dividend

The stock dividend or stock split may be accompanied by an increased cash dividend for example; an investor owns 100 shares of a company paying a Re. 1 dividend. The company declares a 10% stock dividend and at the same time announces that the cash dividend per share will remain unchanged. The investor will have 110 shares and total cash dividend will be Rs. 110 rather than Rs. 100, as before. In this case, a stock dividend increases the total cash dividend.

1.3.2 More Popular Trading Range

A stock split to a lesser extent, a stock dividend is used to place stock in a lower, more popular trading range. So by doing more buyers may be attracted increasing the number of individual's holders. Whether this wider ownership is thing of value is another matter. "More popular trading range" motivation for stock and dividends is widely supported.

1.3.3 Informational or Signalling Effect

The declaration of stock dividend or a stock split may convey information about future earning to investor. There may be asymmetric information between management and investor. As with capital structure and cash-dividend changes, a stock dividend or split may come out more convincingly management's belief about the favourable prospects of the company. In this sense, the stock dividend or split is an attention getting device (*Van Horne, 2006:327*).

1.4 Share Repurchase

Corporate share repurchase is often viewed as an alternative to paying dividends. Especially stock is repurchase when the firm has abnormally high profits and is not in a position to effectively surplus. Under this plan, company distributes cash to the share holders buying back some of its outstanding stock, there by decreasing the number of shares which would increase earning per share (EPS) and stock price. By repurchasing stock, the remaining share holders receive future benefits instead of current high dividend (*Adhikari, 1999:15*).

“If a company/firm has excess cash and insufficient profitable investment of opportunities to justify the use of these funds, it is in the share holder's interest to distribute the funds. The distribution can be accomplished either by repurchases of stock or by paying the funds out in increased dividends.” (*Van Horne, 2006:321*)

So share repurchase is often viewed as an alternative to paying dividends. With repurchase fewer share remain outstanding and earning per share and ultimately dividend per share rises. As a result the market price per share should rise as well.

1.5 Dividend Policies

A company should endeavour to establish a dividend policy that will maximize share holders wealth. Dividend policy refers to the paying of how much portion out of total profit a firm should pay to its shareholders and how much is to be retained for profitable investment opportunities. There are several dividend established by different companies are as follows.

1.5.1 Stable Dividend

The financial manager must be concerned with the stability of dividends to investors. “By stability, we mean maintaining a position in relation to a dividend trend line, preferably one that is upward sloping (*Van Horne, 2006:330*). The stable dividend policy may convey management’s view that future of the company is better than the drop in earning suggests. Thus, management may be able to influence the expectation of investors through the informational content of dividends, if there is a downward trend in earnings; a stable dividend will not convey forever an impression of a rosy future (*Van Horne, 2006:330*). When a firm pays a fix amount of dividend per share over the year and does not change it with fluctuation in the level of its earnings, it is said to be persuade relatively stable dividend policy. This policy is completely a rational policy and poses the strategic financial management. Therefore, it is related to company’s ability to pay dividends.

1.5.2 Stable dividend at lower level than the present level

Sometimes firms are compelled to reduce the dividends per share at level than the present level if the firm has high profitable investment opportunities and needs the funds to finance them. As result this may affect MPS. To minimize this impact, the firm might announce that new level will be maintained in the near future and the board of directors does not

anticipated for their lowering of dividends. This will reduce some of the uncertainty associated with the reduction of dividends.

1.5.3 Stable dividend a higher level than present level of the dividend

It occurs when the firm has not the high profitable opportunities to finance the fund with having high earnings. Frequently, the dividend announcement will favourably affect the price of the common stock. In many cases, the higher earnings will already have caused a rise in the stock price and the dividend declaration will have no effect.

1.5.4 Residual Theory of Dividend

Residual dividend decision is kind of cash dividend payment and the word residual implies “leftover”. Under this policy dividends are paid out from the leftover earnings, “if the firm has retained earnings leftover financing all acceptable investment opportunities, these earnings then will be distributed to stockholders in the form of cash dividends. If not, there will be no dividends” (*Van Horne, 2006:310*). When we treat dividend policy as strictly a financing decision, the payment of cash dividend is a positive residual. It assumes that the internally generated funds are comparatively cheaper than the funds obtained from external sources. The amount of dividend payout will fluctuate from period to period in keeping with fluctuation in the amount of all acceptable investment opportunities available to the firm. If these opportunities abound, the percentage of dividend payout is likely to be zero. On the other hand, if the firm is unable to find profitable investment opportunities, dividend payout will be 100 percent.

Although the residual theory of dividend appears to make further analysis of dividend policy unnecessary, it is indeed not clear that dividends are solely a means of disbursing excess funds. “It would therefore be

important to conclude that there are no other implications of dividend policy and so this study shall take a close look at the relationship between dividends and value” (*Adhikari, 1999:18*)

1.6 Factors Affecting Corporate Dividend Policy

Every corporate organisation always tends to set a corporate dividend policy efficiently and effectively for behalf of the corporate and shareholders as well. There are some factors which are affecting to corporate dividend policy but at that time, therefore these factors have to be taken into consideration while establishing the corporate dividend policy. Following factors needs to be considered

1.6.1 Earning Stability

A company with stable earning pays more dividends in a prospect of continuity of the earnings in the future. But company having fluctuating earning pays less dividend to face its future financial difficulties. The unstable firm is not certain that in subsequent years the hoped for earnings will be realized so it is likely to retain a high proportion of current earnings a lower dividend will be easier to maintain if earnings fall off in the future.

1.6.2 Investment Opportunities

The available profitable investment opportunities of firm affects the dividend decision of the company have lot of such opportunities. It needs excess fund to finance. So the company retains more profit paying fewer amounts as dividends when the investment opportunities occur infrequently, the company may not be justified in retaining the earning at least during the periods when such opportunities exist. If the company retains earning during such periods the retained fund would either be reinvested in short-term securities fielding nominal return or remain idle. This will have an impact of reducing the wealth of the shareholders. Thus the better course in such a case

is to follow a policy of paying dividend and raise the external funds when investment opportunities occur.

1.6.3 Liquidity of Firm

The liquidity position of the firm also affects the fraction of profit to be distributed to the shareholders. Dividend payment represents cash outflows the greater the cash position and overall liquidity of a company the great its ability to pay dividend. But a rapidly growing firm with many profitable investment opportunities find it difficult to maintain adequate liquidity and pay fewer dividends at the time. Because, the management of such a company desires to maintain some liquidity cushion, it may be reluctant to jeopardise this position in order to pay a large dividend or engage in a substantial share buy back.

1.6.4 Growth Prospects

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

1.6.5 Ability to Borrow of the Company

A liquid position is not the only way to provide for flexibility and there by against uncertainty. If a firm has the ability to borrow on comparatively short notice it may be relatively flexible. This ability to borrow can be in the form of a line of creditor a revolving credit from bank or simply the informal willingness of a financial institution to extend credit. In addition, flexibility may come from the ability of company to go to the capital markets with a bond issue. The larger and more established a

company, the better its access to capital markets. The greater the ability of the firm to borrow, the greater its flexibility and the greater its ability to pay cash dividend.

1.6.6 Assessment of any Valuation Information

To the extent that there are insights into the effects of a dividend on valuation, they should be gathered. Most companies look at the dividend payout ratios of other companies in the industry, particularly those having about the same growth. Also a company should judge the informational effect of a dividend the company should ask itself which information is conveying with its present dividend.

1.6.7 Control

If a company pays substantial dividend, it may need to raise capital at a later time through the sale of stock. Under such circumstances the controlling interest of the company may be diluted if controlling stockholders don not or cannot subscribe for additional shares. Thus shareholders who are very sensitive to a potential loss of control prefer a low dividend payout policy.

1.6.8 Restriction in Bond Indenture of Loan Agreement

The protective covenants in a bond indenture or loan agreement often include a restriction on payment of dividends and share repurchase. The restriction is employed by the lenders to preserve the company's ability to service debt. Usually it is expressed as a maximum percentage of cumulative earnings when such a restriction is in force. It naturally influences dividends and share repurchase.

1.6.9 Legal Constraint

Dividend declaration is not only the concern of shareholders and company but it is an issue of the government regulation. So, legal provision

of the concerned government has been affecting the dividend decision of the firm. For example, a firm's capital (share capital) can not be used to make dividend payments, dividends must be paid out of a firm's present and past net earnings, dividend cannot be paid when firm is insolvent, company can't borrow to pay dividend etc. the government, therefore 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.

2. Review of Related Studies

This section specially is related to review of the major studies in general concerning dividend and stock prices, management views on dividend policy and management view on stock dividend. Different studies made by different international scholars and researcher should be overviewed to put light on there issue. Some of the main researchers there are going to be discussed below.

2.1 Modigliani and Millers Study

Modigliani and Miller have an argument for irrelevancy of dividend payout, meaning that the payout of dividend doesn't affect the value of firm or wealth position of shareholders. MM argue that the value of the firm is determined by the earning power of the firm's assets or its investment policy and that the manner in which the earnings stream is split between dividends and retained earning does not affect this value. The following are the critical assumptions;

-) Perfect capital markets in which all investors are rational. Information available to all at no cost, instantaneous without cost, infinitely divisible, securities and no investor large enough to affect the market price of a security.
-) An absence of flotation costs on securities issued by the firm.

-) A world of no taxes.
-) A given investment policy for the firm, not subject to change.
-) Perfect certainty by every investors as a future investment and profits of the firm (MM drops this assumption later)

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

Market Price of Share

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

Thus,

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

Where,

- P₀ = Market Price at the beginning or at the zero period.
- K_e = Cost of equity capital (assume constant)
- D₁ = Dividend per share to be received at the end of the period.
- P₁ = 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.

$$np_0 = \frac{n(D_1 + P_1)}{1 + K_e} \dots\dots\dots (2)$$

Where,

- n = Number of equity shares at zero period.

New Shares

Assuming that the retained earning is not sufficient to finance the investment need of the funds, in that case issuing new shares is the other alternative; say m is the number of newly issued equity shared at the price of P₁.

$$np_0 \times \frac{nd_1 + P_1(n + m) + ZmP_1}{1 + K_e} \dots\dots\dots (3)$$

Where,

- n = Number of shares at the beginning
- m = Number of equity shares issued at the end of the period.

Total number of shares

The issuing of new shares is determined by the amounts of investment in period 1 not by retained earning. The total numbers of new shares can be found out by the following way,

$$mp_1 = I - (E - nD_1) \dots\dots\dots (4)$$

Where,

- mp₁ = The amount collected by issuing new shares.
- m = The numbers of shares
- P₁ = Price of shares
- I = Total new investment requirement
- E = Earning of the firm during the period.
- nD₁ = Total dividend paid
- E - nD₁ = Retained earning

Conclusion

By substituting the value of mp₁ from equation (4) to the equation (3), we find,

$$np_0 \times \frac{nd_1 \Gamma P_1(m \Gamma n) Z I \Gamma E Z n D_1}{1 \Gamma K_e}$$

$$\times \frac{P_1(m \Gamma n) Z I \Gamma E}{1 \Gamma K_e}$$

In such a way, MM approach concludes its result that there is no any role of dividend (D_1) in the above equation. So MM concluded that dividend policy is irrelevant and dividend policy has no effect on the share price (*Van Horne, 2006:311*).

2.2 Friend and Puckett's study

Friend and Puckett conducted a study on the relationship between dividends and stock prices by formulating regression analysis on the data of 110 firms from live industries in the years 1956 and 1958. These five industries were chemicals, electric utilities, electronics, food and steels. The industries were selected to permit a distribution to be made between the results fro growth and non growth industries and pride a basis for companies with results by other authors for earlier years. Both cyclical and non cyclical industries are covered. The periods covered and included a boom year for the economy when stock price levelled off after a substantial rise (1956) and a sum what depressed year for the economy when stock prices, however, rose strongly (1958).

They present the usual simple linear relationship between average price and dividend and retained earnings to show with the data. In addition, they used dividends retained earnings and price earnings ratio as an independent variables in their regression model of price on function.

They also argued that investors should be indifferent if the present value of the additional future returns resulting form earnings retention equals the amount of dividends forgone. Moreover because increase in present

value (market price) are realizable as capital gains, earnings retention carries a tax advantages that lowers the rate of return on corporate investment necessary for shareholders indifference between current dividends and earnings retention. Therefore the influence of earning retention on share price should be a function of the profitability of corporate investment opportunities, *ceteris paribus*, in view of the fact that external equity financing is generally not a completely satisfactory substitute for internal financing. When this corporate rate of profit exceeds the minimum rate required by stockholders, price should be increased as the proportion of earning retained increases. Conversely, when the corporation's profit rate is less than the market rate, price should be decreased with increasing earnings retention.

Their empirical findings indicate that when stock prices are related to current dividends and retained earnings, higher dividend payout is usually associated with higher price-earnings ratios. This results, (it might be noted) is found just about as often in highly profitable growth industries as it is in less profitable ones.

Their analysis suggest that there is little basis for the customary view that in the stock market generally, except for unusual growth stocks, a dollar of dividends has several times the impact of price of a dollar of retained earnings. It also concluded that it is possible that management might be able, at least some measure, to increase stock prices in non growth industries by raising dividends an in growth industries by greater retention (*Friend and Puckett, Sept. 1964:656*).

2.3 Robert J. Shiller's Study

He has an argument regarding the stock market volatility that according to the efficient market hypothesis, price changes occur when new information about the true investment value of stock becomes to the public, the price changes are big because the information is about something very important. He has also used the statistical tools like standards deviation. There are three indicators of change in true investment value of the aggregate stock markets in the United States from 1871 to 1986 are considered, change in dividends, in real interest rates and in a direct measure of inter temporal marginal rates of substitution. So statistical analysis of aggregate historical data have recently raised questions of whether something sufficiently large does indeed happen to true investment value to justify the price movements.

It concluded that price (P_t) or its ratio to dividend $\frac{P_t}{D_t - 1}$ generally appears to show too much variability given its correlation with its perfect foresight counterpart under any of the models considered.

For an aggregate stock market, the wide spread impression that there is a strong evidence for market efficiency may be due just to lack of appreciation to the low power of many statistical tests. The notion of efficient markets of course also has value in the simple sense that stock markets returns are not highly forecast able (*Shiller, Jan 2, 1987, p.33*)

2.4 G. William Schwert's Study

He analysed the relation of stock volatility over the time. In his argument, he claimed that not only the dividend policy factor causes in the fluctuation of the stock price in the stock market but also stock market may fluctuate due to change in time. He therefore brought the relation of stock volatility with real and nominal macro economic volatility, economic activity, financial leverage and stock trading activity using monthly data from 1857 to 1987. An important fact, previously noted by Officer (1973), is that stock return variability was unusually high during the 1929-1939 great depression while aggregate leverage is significantly correlated with volatility; it explains a relatively small part of the movements in stock volatility. "The amplitudes of the fluctuation in aggregate stock volatility are difficult to explain using simple models of stock valuation especially during the great depression.

Estimation of the standard deviation of monthly stock returns vary from two to twenty per month during the 1857-1987 period, large changes in the extent volatility of market returns have important negative effect on risk-averse in investors. Moreover changes in the level of market volatility can have important effect on capital investment, consumption and other cycle variables. This therefore raises the question of why stock volatility changes so much over time.

In addition researchers have studied movements in aggregate stock market volatility. For example Officer (1973) relates these changes to the volatility of macro-economic variables. Black (1976) and Christie (1982) argue that financial leverage partly explains this phenomenon. Similarly Shiller (1981 a, b) argues that the level of stock market volatility is too high relative to the ex-post variability of dividends.

Finally stock market volatility increases during recession. It is useful to think of the stock price (Pt) as the discounted present value of expected future cash flows to stockholders.

$$E_{t-1} P_t = \sum_{k=1}^{\infty} \frac{D_{t+k}}{(1 + R_{t+k})^k} \dots \dots \dots (1)$$

Where,

P_t = Discounted present value

D_{t+k} = Capital gain plus dividend paid to stockholders in period t+k

$\frac{1}{1 + R_{t+k}}$ = The discount rate for period t+k based on information available at time (t-1)

E_{t-1} = Conditional expectation

In overall, it can be concluded that the changes in stock market occurs over the time. At the aggregate level, the value of corporate equity clearly depends upon health of the economy if discount rates are constant overtime in equation (1) the conditional variance of security price is proportional to the conditional variance of the expected future cash flows (*Schwert, Dec1989:1115*).

2.5 Walters Study

Walter studied on dividend and stock price in 1966. According to him the dividend policy of a firm can not be looked aside from investment policy. His argument is just the opposite of what Modigliani and Miller said. Walter argued that dividend policy affects the stock prices, means dividend is relevant with stock prices. The relationship between firm’s internal rate of return and cost of capital is determining factors to retain profits or distribute dividends. As long as the internal rate is greater than the cost of capital, the

stock price will be enhanced by retention and will vary with dividend payout.

His model was based on numbers of assumptions as given below;

-) Retained earnings constitute the exclusive source of financing. The firm does not resort to debt or equity financing.
-) The firm's internal rate of return and its cost of capital are constant.
-) The firm distributes its entire earnings or retain it for reinvestment immediately.
-) There is no change in values of earnings per share and the dividend per share.
-) The firm has perpetual life.

Considering the above assumptions, Walter's model to determine the market price per share is as follows;

$$P = \frac{DPS \left(\frac{r}{k(1 - \frac{r}{k})} \right)}{k}$$

Where,

P = Market price per share

DPS = Dividend per share

EPS = Earning per share

r = Internal rate of return

k = Cost of capital

According to him the given firm may have three situations. They are;

$r > k$,

If the firm's internal rate of return exceeds the cost of capital, the relation between dividends and stock prices is negative, means, more dividend leads to low stock prices. This kind of firms is referred to as growth

firm. Walther argued that zero dividend would maximize the market value of shared for growth firm.

$$r = k,$$

If the firm has $r = k$, there is no role of dividends on stock prices, means, dividends are indifferent from stock prices. In other words, dividend payout does not affect the value of share whether the firm retains the profit or distributes dividends, is a matter of indifference. This kind of firm is referred as normal firm.

$$r < k,$$

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

To conclude, according to Walter, when the firm is in growth stage, then dividends are negatively correlated with stock prices. In the declining firms, dividends are positively correlated with stock prices. In the normal firm, there is no relationship between dividends and stock prices, means; dividend is indifferent to variation in market price of share.

3. Review of Major Studies in Nepal

There are few studies made in context of Nepal with regard to dividend and stock prices because of information lack and lack of experts, the studies is limited in this regard. Even though, some studies are made which are reviewed as follow;

3.1 Radhe S. Pradhan's Study

The study, *Stock Market Behaviour in a Small Capital Market: A Case on Nepal* was conducted in the study period 1986 – 1990, covering 17 enterprises. Following findings were observed in connection with dividend behaviour;

-) Higher the earnings on the stock, larger the ratio of dividends per share to market price per share.
 -) Stock with larger ratio of dividend per share to market price per share has higher liquidity.
 -) Positive relationship between the ration 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 profitability.
 -) Positive relationship between dividend payout and turnover ratio.
 -) Positive relationship between dividend payout and interest coverage.
- (Pradhan, 1993)*

3.2 Timilsina's Study

This study on “Dividends and Stock Prices” was carried out using the data for 16 enterprises form 1990 through 1994. Timilsina's study was based on 45 observations.

The objectives of this study were as follows;

-) To test the relationship between dividends per share and stock prices.
-) To determine the impact of dividend policy on stock prices.
-) To identify whether it is possible to increase the market value of the stock changing dividend policy or payout ratio.

To explain prices behaviour, the study used simultaneous equation model as developed by Friend and Puckett (1964). The findings of this study were as follows;

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

The relationship between stock prices and lagged earnings price ratio is negative (*Timilsina, 1997*)

3.3 Bhattari's Study

Bhattarai has conducted 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 expectation of investors and there 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 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 was guided by technical factors.
-) Most of the companies displaying the lower price earning ratio.

-) Wide gap was recorded in the percentage of cash dividend paid by the listed public listed ltd. companies.
-) The expected percentage of dividend of investors was not matching with the actual percentage. So, majority of the companies declaring less percentage than the risk free of return plus risk premium are unable to maintain investor's psychology in marketing. (*Bhattarai, 1990*)

3.4 K.C.'s Study

The thesis paper "Dividend Policy of Joint Venture Banks in Nepal" of Mr. Pramesh K.C. have covered the period of 1984/85 to 1989/90 with the following objectives;

-) To provide conceptual framework of dividend models.
-) To analyse the financial variables affecting the stock value and interpret the dividend paying implication under dividend valuation model.
-) To suggest the policy that will give vision for determination and espousal of dividend of joint venture banks.

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

-) The earning per share of all joint venture banks were raised satisfactorily.
-) The P/E ratio, earning yield, dividend yield percentage exposed cyclical behaviour.
-) R/E ratio is fluctuated in smaller proportion.
-) The market value per share of joint venture banks stocks in security exchange centre was significantly fluctuated and trading on high price.

-) Joint venture banks in Nepal were seen as growth banks because actual capitalisation rate (r) is higher than the normal capitalisation rate (k) which is $r > k$.
-) Cash Dividend Per Share (CDPS) of joint venture banks is significantly increasing in each year (*K.C., 1991*)

3.5 Adhikari's Study

The study has covered the period of 1990-1996 with the total observation of 47 firms in financial sector and 30 in non-financial sector. The basic objectives of the study are;

-) To analyse the properties of portfolio forms on dividends.
-) To examine the relationship between dividend and stock price.
-) To survey the opinion of financial executives on corporate dividend practices.

The main findings of the study are;

-) Stocks with large ratio of dividend per share to book value per share have higher liquidity.
-) Stocks with larger ratio of dividend per share to book value per share have higher profitability.
-) Positive relationship is there between the ration of dividend per share to the book value per share and turnover ratio.
-) There is positive relationship between the dividend payout ratio and current ratio whereas the negative relationship between dividend payout and quick ratio.
-) There is negative relationship between dividend payout and the earning before tax to net worth.
-) There is positive relationship between dividend payout and interest coverage ratio. (*Adhikari, 1999*)

4. Legal Provisions Regarding Dividend

In Nepal, Nepal Company Act 2064 has made some legal provisions for dividend payments. The provisions may be seen as under.

Section 2 (P) states that bonus share (stock dividend) means shares issued in the form of additional shares to shareholders by capitalizing the surplus from the profits or the reserve fund of company. The term also denotes an increase in the paid up values of the shares after capitalizing surplus or reserve funds.

Section 61 has prohibited company from purchasing its own shares. This section states that no company shall purchase its own shares or supply loans against the security of its own shares.

Section 179 Bonus shares and sub section (1) states that the company must inform the office before issuing bonus shares under sub-section (1), this may be done only according to a special resolution passed by the general meeting.

Section 182 Dividends and Sub-sections of these sections are as follows;

Subsection (1). Except in the following circumstances, dividends shall be distributed among the shareholders within 45 days from the date of decision to distribute them.

- a. In case any law forbids the distribution of dividends.
- b. In case the right to dividend is disputed.
- c. In case dividends can not be distributed within the time limit mentioned above owing to circumstances beyond anyone's control and without any fault on the part of the company.

Subsection (2) without the permission of the government, fully owned shares or majority owned shares of the government's institution can't be distributed as the dividend. Government can forward the direction for distribution of these organizations for distribution of dividend.

Subsection (3) In case dividends are not distributed within the time limit mentioned in Sub-section (1), this shall be done by adding interest at the prescribed rate.

Subsection (4) only the person whose name stands registered in the register of existing shareholder at the time of declaring the dividend shall be entitled to it.

All the above indicate that Nepalese law prohibits repurchase of stock which is against the theory of finance. The reason for this kind of provision is not known. (*Nepal Company Act, 2064*)

CHAPTER- III

RESEARCH METHODOLOGY

1. Introduction

Research methodology describes the methods and processes applied in the entire aspects of study. Every research should be outlined in a systematic manner and for that reason Research Methodology is one of the 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.

The basic objectives of this study are to explain, test and analyse dividend policy and stock price volatility means its impact of market price of stock. Therefore, some systematic research methodologies are used. This study is basically based on secondary data but primary data too are used. Hence some related questionnaires are given to concerned bodies for the purpose of practical study.

2. Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. Analytical and descriptive approaches are used to evaluate dividend policy of the sample firms. The analysis is basically based on the secondary data; financial statements of seven years from 2000/01 to 2006/07 of five commercial banks are being taken.

3. Population and Sample

There are 17 listed commercial banks spreading their shares in the stock market. So it is not easy to study all of them. Therefore five banks are taken as sample among the 17 listed commercial banks. The five banks (SCBL, NABIL, SBIL, EBL and HBL) are taken as sample because by nature they are established as joint venture bank though some are not joint venture banks at present time. The listed banks are as follows;

Name of Banks	Estd. Date	Head Office	Date of Listing
Bank of Kathmandu Ltd.	2051/11/26	Kathmandu	2054/04/02
Everest Bank Ltd.*	2051/07/01	Kathmandu	2052/12/25
Himalayan Bank Ltd.*	2049/10/05	Kathmandu	2050/03/01
Kumari Bank Ltd.	2057/12/21	Kathmandu	2061/04/14
Laxmi Bank Ltd.	2058/12/21	Birgunj	2061/01/08
Lumbini Bank Ltd.	2055/04/01	Narayanghat	2061/07/25
Machhapuchhre Bank Ltd.	2057/06/17	Pokhara	2060/02/14
NCC Bank Ltd.	2053/06/28	Bhairahawa	2061/10/18
Nepal Bangladesh Bank Ltd.	2050/02/03	Kathmandu	2052/09/09
Nepal Investment Bank Ltd.	2042/12/06	Kathmandu	2043/04/07
Nepal SBI Bank Ltd.*	2050/03/23	Kathmandu	2051/10/03
NIC Bank Ltd.	2055/04/05	Biratnagar	2057/03/31
Siddhartha Bank Ltd.	2059/09/09	Kathmandu	2062/11/12
Standard Chartered Bank Ltd.*	2043/10/16	Kathmandu	2045/03/20
Nabil Bank Ltd.*	2041/03/23	Kathmandu	2042/08/09
NMB Bank Ltd.	2053/08/11	Kathmandu	2058//03/06
Development Credit Bank Ltd.	2057/10/10	Kathmandu	2059/02/30

Source :Security Board of Nepal

* = Banks selected as sample

4. Sources and Techniques of Data Collection

Almost all the analysis is based on secondary data. In this analysis, data are collected from different sources i.e. *Nepal Stock Exchange, Annual Reports of Commercial Banks, Business Journal, Newspaper* and different web sites like *www.nepalstock.com, www.google.com* etc. For the purpose of analysis of data of seven (7) years are taken as sample years from 2000/01 to 2006/07. All the collected secondary data will be analysed by using financial and statistical tools as follows.

4.1 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.

4.1.1 Earning Per Share (EPS)

EPS is calculated to know earning capacity and to make the comparison between the commercial banks. EPS is defined as the result received by dividing net profit after taxes by number of common stock outstanding in equation.

$$\text{EPS} \times \frac{\text{Net Profit After Tax}}{\text{No. of Common Stock Outstanding}}$$

4.1.2 Dividend per Share (DPS)

DPS indicate the port of earning distributed to the share holder on per share basis and calculated by dividing the total dividend to equity share holder by the total number of equity shares.

$$\text{DPS} \times \frac{\text{Total Dividend}}{\text{No. of Common Stock Outstanding}}$$

4.1.3 Dividend Payout Ratio (D/P ratio)

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

$$D/P \text{ X } \frac{\text{Dividend Per Share (DPS)}}{\text{Earning Per Share (EPS)}}$$

4.1.4 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.

4.2. Statistical Tools

A brief explanation of statistical tools used in this study is as follows;

4.2.1 Arithmetic Mean

Arithmetic mean of a given set of observation is their sum divided by the number of observation. In general X_1, X_2, \dots, X_n are the given “n” observation, and then their arithmetic mean is usually denoted by \bar{X} is given by;

$$\bar{X} = \frac{x_1 + x_2 + \dots + x_n}{n}$$

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

Where,

\bar{X} = Mean

X_1, X_2, \dots, X_n = Set of observations

n = Number of items observed

4.2.2 The Coefficient of Variation (CV)

The coefficient of variation is the relative measure of dispersion, which is denoted as the ratio of the standard deviation to the mean expressed in percent (*Levin and Rubin, 1995, p.114*).

Symbolically,

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

Where,

S.D. = Standard deviation

\bar{X} = Mean average

The higher the CV, the higher is variability of variables and vice versa.

4.2.3 Standard Deviation (S.D)

The measurement of the scattering of the mass of figures in a series about an average is known as dispersion. The standard deviation means the absolute dispersion. The greater amount of dispersion greater the standard deviation will be. A small standard deviation means high degree of uniformity of the observation as well as homogeneity of a series whereas a large standard deviation means just opposite.

Symbolically,

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

4.2.4 Coefficient of Correlation (R)

Correlation analysis is the statistical tools that can be used to describe the degree to which one variable is linearly related to another (*Levin and Rubin, 1995, p. 713*). The coefficient of correlation measures the direction of relationship between two sets of figures. It is the square root of the coefficient of determination. If both variables are changing in the same direction, then 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 MPS and DPS, MPS and EPS, NWPS and DPS and DPS and EPS.

4.2.5 Coefficient of Determination (R^2)

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^2 measures the percentage total variation in dependent explained by independent variables. The coefficient of determination can have value ranging from zero to one. In this study, R^2 is calculated as the requirement of model.

4.2.6 Regression Equation

Regression is the statistical tool which is used to determine the statistical relationship between two (or more) variables on the basis of the other variables. In other words, regression is that statistical tool with the help of which the unknown value of one variable can be estimated (or predicted) on the basis of known value of the other variable. There are two types of 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 and one another variable called independent or

explanatory. Other is called multiple-linear regression analysis, which is concerned with the study of the relationship between one variable called the dependent or explained variable and other more than one variable called independent or explanatory variable. The regression analysis submits the following two concepts.

4.2.6.1 Regression Constant (a)

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

4.2.6.2 Regression Coefficients (b₁, b₂, b₃.....)

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 variables in the regression model. In other words, the coefficients describe how changes in independent variables affect the values of dependent variables estimates.

This study analyses the simple regression analysis of following variables.

) Market Price per Share on Dividend per Share

The model is,

$$MPS = a + b DPS$$

MPS = Market Price per Share (Dependent variable)

DPS = Dividend per Share (Independent variable)

a = Regression constant (Y intercept)

b = Regression coefficient (Slope of the line)

This model helps to analyse the dependency of MPS on DPS.

) Market Price per Share on Earning per Share

The model is,

$$MPS = a + b EPS$$

MPS = Market Price per Share (Dependent variable)

EPS = Earning per Share (Independent variable)

a = Regression constant (Y intercept)

b = Regression coefficient (Slope of the line)

This model helps to test the dependency of MPS on EPS

) Dividend per Share on Earning per Share

The model is,

$$DPS = a + b EPS$$

DPS = Dividend per Share (Dependent variable)

EPS = Earning per Share (Independent variable)

a = Regression constant (Y intercept)

b = Regression coefficient (Slope of the line)

This analysis enables to know whether EPS is influencing factor of DPS or not.

This study analyses the multiple regression of variables considered, as per the following model,

$$MPS = a + b_1DPS + b_2EPS$$

MPS = Market Price per Share (Dependent variable)

DPS = Dividend per Share (Independent variable)

EPS = Earning per Share (Independent variable)

NWPS = Net Worth per Share (Independent variable)

$a =$ Regression constant (Y intercept)

$b_1, b_2, b_3 =$ Regression coefficients (Slope of the line)

4.2.7 Standard Error of Estimates (SEE)

With the help of regression equations perfect prediction is practically impossible. Standard error of estimate is a measurement of the reliability of the regression line, that is, extend to which observed values differ from their predicted value on the regression line. The smaller the value of SEE, the closer will be the dots to the regression line and the better the estimates based on the equation for this line. If SEE is zero, then there is no variation about the line and the correlation possible for us to ascertain how good the representative the regression line is as a description of the average relationship between two series.

4.2.8 Probable Error (PE)

The probable error is used to measure the reliability and test of significance of correlation coefficient. It is calculated by the following formula.

$$PE = 0.6745 \frac{1 - r^2}{\sqrt{n}}$$

Where,

$r =$ The value of correlation coefficient

$n =$ Number of pairs of observation

PE is used in interpretation whether the calculated value of r is significant or not.

1. If $r < 6 PE$, it is insignificant, i.e. there is no evidence of correlation.
2. If $r > 6 PE$, it is significant.
3. If $PE < r < 6 PE$, nothing can be inferred.

4.2.9 T-Statistics

As the sample size is less than 30, t-test in such context of small sample size is used to test the validity of our assumption. The 't' value is calculated with the help of SPSS software and 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 (say 0.05), 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.

4.2.10 F-Statistics

To test whether the two independent estimates of population variances are significantly different or not, or to test whether they establish the fact that both the samples have come from the same universe and have a common variance, or to test whether a given population follows an uniform distribution.

CHAPTER- IV

DATA PRESENTATION AND ANALYSIS

Introduction

This chapter includes four sub-headings, at first analysis of financial indicators and variables are presented. The simple and multiple regression analysis are the next two sub headings. Lastly the test of hypothesis and major findings are presented. Therefore this chapter is based on the presentation and analysis of the secondary data, which help to conclude some recommendation.

1. Analysis of Financial Indicator and Variables

1.1. Analysis of Market Price per Share (MPS)

Market price of share is the value of stock, which can be received by firm or equity holders selling it in capital market. The capital market determines MPS. MPS represents the closing market price of NEPSE index of the sample firm. Following table shows the market price of stock (MPS) of the sample firms.

Table 1.1
Market Price per Share (in Rs.)

Fiscal Years	SCBL	NABIL	SBIL	EBL	HBL
2000/01	2144	1500	500	650	1500
2001/02	1575	700	401	405	1000
2002/03	1640	740	255	445	836
2003/04	1745	1000	307	680	840
2004/05	2345	1505	335	870	920
2005/06	3775	2240	612	1379	1100
2006/07	5900	5050	1176	2430	1740
Mean (\bar{X})	2732	1819.29	512.29	979.86	1133.71
S.D	222.24	120.68	4.64	124.67	138.44
CV	0.0813	0.0663	0.0091	0.1272	0.1221

Source: Security Board of Nepal and Appendix I

As per the table shown above the highest MPS of SCBL, NABIL, SBIL, EBL and HBL are Rs.5900, Rs.5050, Rs.1176, Rs.2430 and Rs.1740 respectively. In the same way the lowest MPS of SCBL, NABIL, SBIL, EBL and HBL are Rs.1575, Rs.700, Rs.255, Rs.405 and Rs.836 respectively.

Hence from the analysis of above MPS the average MPS of SCBL is the highest and indicates the highest profitability to shareholders because it has the greater amount in MPS in respective year than the other banks.

In the same way the S.D. of SCBL is the highest among sample banks, which indicates there is less consistency in MPS where as the S.D. of SBIL is the lowest among all the sample banks which indicates the higher degree of consistency in MPS.

Similarly the EBL has highest CV, which indicates there is high degree of fluctuation in MPS among the entire sample banks, whereas the SBIL has

lowest CV, which indicates the low degree of variation in MPS among the sample banks.

1.2 Analysis of Earning Per Share (EPS)

Earning per share (EPS) is one of the most important financial indicators, which measures the earning capacity of a firm. It measures the profit available to the ordinary shareholders on a per share basis. EPS is calculated by dividing net income available to the common stockholders by the total number of common shares outstanding. Following table shows the EPS of the sample firms.

Table 1.2
Earning Per Share (in Rs.)

Fiscal Years	SCBL	NABIL	SBIL	EBL	HBL
2000/01	126.88	59.26	8.69	31.56	93.57
2001/02	141.13	55.25	9.61	32.91	60.26
2002/03	149.30	84.66	11.47	29.90	49.45
2003/04	143.55	92.61	14.26	45.58	49.05
2004/05	143.14	105.49	13.29	54.22	47.91
2005/06	175.84	129.21	18.27	62.78	59.24
2006/07	167.37	137.08	39.35	78.4	60.66
Mean (\bar{X})	149.6014	94.7942	16.42	47.9071	60.02
S.D	15.45	29.33	9.81	16.96	14.66
CV	0.1033	0.3094	0.5974	0.3540	0.2443

Source: Security Board of Nepal and Appendix II

The above mentioned comparative table shows that EPS of the all banks are in fluctuating trend throughout the study period the maximum EPS of SCBL, NABIL, SBIL, EBL and HBL are Rs.175.84, Rs.137.08, Rs.39.35, Rs.78.4 and Rs.93.57 respectively. On the other hand the minimum EPS of

SCBL, NABIL, SBIL, EBL and HBL are Rs.126.88, Rs.55.25, Rs.8.69, Rs.29.90 and Rs.47.91 respectively.

Thus, the analysis of EPS trend shows that average EPS in SCBL is greater than that of other banks. It indicates that the SCBL's profitability of common shareholders investment is better than other banks.

The highest S.D. in EPS is of NABIL, which indicates the greater dispersion in variable whereas the SBIL has lowest S.D., which indicates the high degree of uniformity in the given variable (DPS).

Similarly the highest CV in EPS of SBIL indicates that higher variability of variables whereas a smaller CV in EPS of SCBL shows the less variation in variables.

1.3 Analysis of Dividend per Share (DPS)

Dividend per share (DPS) is the amount which is paid to common shareholders on a per share basis. DPS shows what exactly the ordinary shareholders receive. It is calculated by dividing the total dividend to equity shareholders by the total numbers of equity shares. The following table shows the dividend per share (DPS) of the sample banks.

Table 1.3
Dividend per Share (in Rs.)

Fiscal Years	SCBL	NABIL	SBIL	EBL	HBL
2000/01	100	60	20	20	27.5
2001/02	100	30	-	-	25
2002/03	110	50	8	20	1.32
2003/04	110	65	-	20	-
2004/05	120	70	-	-	11.58
2005/06	130	85	5	25	35
2006/07	80	100	12.59	10	15
Mean (\bar{X})	107.1428	65.7142	6.5128	13.5714	16.4857
S.D	14.85	21.12	7.08	9.53	12.33
CV	0.1386	0.3214	1.0816	0.7022	0.7479

Source: Security Board of Nepal and Appendix III

The above table shows that dividend per share of all the sample firms are in fluctuating trend. The highest DPS of SCBL, NABIL, SBIL, EBL and HBL are Rs.130, Rs.100, Rs.20, Rs.25, and Rs.35 respectively and the lowest DPS of SCBL, NABIL, SBIL, EBL and HBL are Rs.80, Rs.30, Rs.5, Rs.10 and Rs.1.32 respectively. The mean DPS of SCBL is greater than that of other banks; this indicates the profitability of common shareholders investment is better than other banks, which creates the positive attitude of the shareholders towards the bank.

In the same way the S.D. of SBIL is the lowest, which mean the high degree of uniformity of the DPS paid by the bank, whereas the S.D. of NABIL is the highest, which indicates the high degree of dispersion in DPS than other banks.

Similarly, the analysis of CV reflects that SBIL has the highest CV in DPS, which indicates high degree of variability on DPS. Whereas SCBL has the lowest CV in DPS, which reflects lower degree of variation in DPS.

1.4 Analysis of Dividend Payout Ratio (D/P ratio)

Dividend payout ratio (D/P ratio) indicates that what percentage of actual earning of a firm has been received by the ordinary shareholders. It is calculated by dividing the dividend per share to ordinary shareholders by earning per share (EPS). Following table shows the dividend payout ratio of sample banks.

Table 1.4
Dividend Payout Ratio

Fiscal Years	SCBL	NABIL	SBIL	EBL	HBL
2000/01	0.7881	1.012	1.7261	0.6337	0.2939
2001/02	0.7086	0.543	-	-	0.4149
2002/03	0.7368	0.5909	0.6975	0.6689	0.0267
2003/04	0.7663	0.7019	-	0.4388	-
2004/05	0.8383	0.6636	-	-	0.2417
2005/06	0.7379	0.6578	0.3418	0.3989	0.5908
2006/07	0.478	0.7295	0.3199	0.1276	0.2473
Mean (\bar{X})	0.722	0.699814	0.440757	0.323986	0.259329
S.D	0.232	0.2651	0.1869	0.3555	0.4035
CV	0.3213	0.3788	0.424	1.0973	1.556

Source: Security Board of Nepal and Appendix IV

From the table shown above, the highest D/P ratio of SCBL, NABIL, SBIL, EBL and HBL is 0.8383, 1.012, 1.7261, 0.6689 AND 0.5908 respectively. Similarly the lowest D/P ratio of SCBL, NABIL, SBIL, EBL and HBL is 0.478, 0.543, 0.3199, 0.1276 and 0.2417 respectively. Among

the sample banks the average D/P ratio of SCBL is the highest, which indicates that SCBL has paid highest dividend out of its total EPS whereas HBL has the lowest D/P ratio, which indicates that HBL has paid the lowest dividend out of its EPS.

In the same way the S.D. of D/P ratio of HBL is the highest, which indicates that it has not paid dividend homogeneously out of its EPS, whereas SCBL has the lowest D/P ratio, which indicates SCBL has paid the dividend homogeneously than other banks taken as sample.

Similarly, HBL has the highest CV of D/P ratio, which indicates that this bank has high degree of variation D/P ratio, whereas SCBL has the lowest CV, which indicates there is lower degree of variability in D/P ratio.

2. Correlation Analysis

This analysis is generally used to describe to the degree to which any variable is related to another. It helps to determine whether a positive or negative relationship exists or to establish cause and effect relation if any. This part analyses the correlation between;

- 1. MPS and DPS*
- 2. MPS and EPS*
- 3. DPS and EPS*

2.1 Correlation between MPS and DPS

Table 2.1
Correlation between MPS and DPS

Banks	Correlation coefficient (R)	Relationship	Probable error	Result
SCBL	0.397	Positive	0.2148	Insignificant
NABIL	0.849	Positive	0.0712	Significant
SBIL	0.121	Positive	0.2512	Insignificant
EBL	0.662	Positive	0.1432	Insignificant
HBL	0.280	Positive	0.2349	Insignificant

Source: Appendix VI

Above table 2.1 depicts the relationship between MPS and DPS of the sample banks SCBL, NABIL, SBIL, EBL and HBL. The correlation between MPS and DPS of all the banks is positive, which indicates that if DPS is increased then MPS will also be increased and if DPS is decreased then MPS will also be decreased.

The significance of the relationship between MPS and DPS is measured by calculating probable error of correlation of coefficient. The coefficient of correlation (R) of NABIL appears to be greater than 6PE hence the relationship between MPS and DPS is significant. But in case of SCBL, SBIL, EBL and HBL the coefficient of correlation (R) appears to be less than 6PE hence the relationship between MPS and DPS is insignificant.

2.2 Correlation between MPS and EPS

Table 2.2
Correlation between MPS and EPS

Banks	Correlation coefficient (R)	Relationship	Probable error	Result
SCBL	0.727	Positive	0.1202	Significant
NABIL	0.747	Positive	0.1127	Significant
SBIL	0.919	Positive	0.0396	Insignificant
EBL	0.936	Positive	0.0316	Significant
HBL	0.647	Positive	0.1482	Insignificant

Source: Appendix VI

Above table 2.2 depicts the relationship between MPS and EPS of the sample banks SCBL, NABIL, SBIL, EBL and HBL. The correlation between MPS and EPS of all the banks is positive, which indicates that if EPS is increased then MPS will also be increased and if EPS is decreased then MPS will also be decreased.

The significance of the relationship between MPS and EPS is measured by calculating probable error of correlation of coefficient. The coefficient of correlation (R) of SCBL, NABIL and EBL appears to be greater than 6PE hence the relationship between MPS and EPS is significant. But in case of SBIL and HBL the coefficient of correlation (R) appears to be less than 6PE hence the relationship between MPS and EPS is insignificant.

2.3 Correlation between DPS and EPS

Table 2.3
Correlation between DPS and EPS

Banks	Correlation coefficient (R)	Relationship	Probable error	Result
SCBL	0.149	Positive	0.2493	Insignificant
NABIL	0.908	Positive	0.0447	Significant
SBIL	0.126	Positive	0.2509	Insignificant
EBL	0.487	Positive	0.1945	Insignificant
HBL	0.540	Positive	0.1806	Insignificant

Source: Appendix VI

Above table 2.3 depicts the relationship between DPS and EPS of the sample banks SCBL, NABIL, SBIL, EBL and HBL. The correlation between DPS and EPS of all the banks is positive, which indicates that if EPS is increased then DPS will also be increased and if EPS is decreased then DPS will also be decreased.

The significance of the relationship between DPS and EPS is measured by calculating probable error of correlation of coefficient. The coefficient of correlation (R) of NABIL appears to be greater than 6PE hence the relationship between DPS and EPS is significant. But in case of SCBL, SBIL, EBL and HBL the coefficient of correlation (R) appears to be less than 6PE hence the relationship between DPS and EPS is insignificant.

3. Test of Hypothesis

This part of study is concerned with the relationship between MPS, DPS and EPS of sample banks. In order to test whether the sample correlation coefficient 'r' is significant of any correlation between the variables in the population or it is just due to fluctuation of sampling, we use t-test for significance of an observed sample correlation coefficient.

3.1 Hypothesis Test of MPS and DPS of Sample Banks

Null Hypothesis: H_0 : $\rho = 0$ i.e. the variables (MPS and DPS) are not correlated in the population or population correlation coefficient is zero.

Alternative Hypothesis: H_1 : $\rho \neq 0$ i.e. the variables are correlated in the population or population correlation coefficient is not zero.

Test statistics under null hypothesis H_0 is;

$$t = \frac{r}{\sqrt{1-r^2}} \sqrt{n-2}$$

Degree of freedom = n-2

$$5-2 = 3$$

Level of significance = 5%

Table 3.1

Banks	t_{cal}	t_{tab}	Comparative status	Result
SCBL	0.966	3.182	$t_{cal} < t_{tab}$	Insignificant
NABIL	3.593	3.182	$t_{cal} > t_{tab}$	Significant
SBIL	0.172	3.182	$t_{cal} < t_{tab}$	Insignificant
EBL	1.532	3.182	$t_{cal} < t_{tab}$	Insignificant
HBL	0.583	3.182	$t_{cal} < t_{tab}$	Insignificant

Significant = H_0 is accepted and H_1 rejected

Insignificant = H_0 is rejected and H_1 accepted

Now it is clearly seen from the above table that the variables of NABIL are correlated but the variables of SCBL, SBIL, EBL and HBL are not correlated. It means the DPS of NABIL affects the MPS positively. Hence there is increment in MPS due to increment in DPS. But the DPS of SCBL, SBIL, EBL and HBL do not affect MPS positively. Hence there is not any increment in MPS of SCBL, SBIL, EBL and HBL even though the DPS is increased.

3.2 Hypothesis Test of MPS and EPS of Sample Banks

Null Hypothesis: H_0 : $\rho = 0$ i.e. the variables (MPS and EPS) are not correlated in the population or population correlation coefficient is zero.

Alternative Hypothesis: H_1 : $\rho \neq 0$ i.e. the variables are correlated in the population or population correlation coefficient is not zero.

Test statistics under null hypothesis H_0 is;

$$t = \frac{r}{\sqrt{\frac{1-r^2}{n-2}}}$$

Degree of freedom = n-2

$$5-2 = 3$$

Level of significance = 5%

Table 3.2

Banks	t_{cal}	t_{tab}	Comparative status	Result
SCBL	2.370	3.182	$t_{cal} < t_{tab}$	Insignificant
NABIL	2.511	3.182	$t_{cal} < t_{tab}$	Insignificant
SCBIL	5.213	3.182	$t_{cal} > t_{tab}$	Significant
EBL	5.943	3.182	$t_{cal} > t_{tab}$	Significant
HBL	1.899	3.182	$t_{cal} < t_{tab}$	Insignificant

Significant = H_0 is accepted and H_1 rejected

Insignificant = H_0 is rejected and H_1 accepted

Now it is clearly seen from the above table that the variables of SCBIL and EBL are correlated but the variables of SCBL, NABIL and HBL are not correlated. It means the EPS of SCBIL and EBL affects the MPS positively. Hence there is increment in MPS due to increment in EPS. But the EPS of SCBL, NABIL and HBL do not affect MPS positively. Hence there is not any increment in MPS of SCBL, NABIL and HBL even though the EPS is increased.

3.3 Hypothesis Test of DPS and EPS of Sample Banks

Null Hypothesis: H_0 : $\rho = 0$ i.e. the variables (DPS and EPS) are not correlated in the population or population correlation coefficient is zero.

Alternative Hypothesis: H_1 : $\rho \neq 0$ i.e. the variables are correlated in the population or population correlation coefficient is not zero.

Test statistics under null hypothesis H_0 is;

$$t = \frac{r}{\sqrt{\frac{1-r^2}{n}}} \sim \sqrt{n} \frac{r}{\sqrt{1-r^2}}$$

Degree of freedom = $n-2$

$$5-2 = 3$$

Level of significance = 5%

Table 3.3

Banks	t_{cal}	t_{tab}	Comparative status	Result
SCBL	0.337	3.182	$t_{cal} < t_{tab}$	Insignificant
NABIL	4.840	3.182	$t_{cal} > t_{tab}$	Significant
SCBIL	0.179	3.182	$t_{cal} < t_{tab}$	Insignificant
EBL	0.965	3.182	$t_{cal} < t_{tab}$	Insignificant
HBL	1.284	3.182	$t_{cal} < t_{tab}$	Insignificant

Significant = H_0 is accepted and H_1 rejected

Insignificant = H_0 is rejected and H_1 accepted

Now it is clearly seen from the above table that the variables of NABIL are correlated but the variables of SCBL, SBIL, EBL and HBL are not correlated. It means the EPS of NABIL affects the DPS positively. Hence there is increment in DPS due to increment in EPS. But the EPS of SCBL, SBIL, EBL and HBL do not affect DPS positively. Hence there is not any increment in DPS of SCBL, SBIL, EBL and HBL even though the EPS is increased.

4. Simple Regression Analysis

Regression analysis is based on the relationship between two or more variables. The known variables are independent variables and the variables to predict are dependent variables. In this study, MPS, EPS and DPS are analysed. This part is related to the analysis of the relationship between

1. Market price of stock (MPS) on dividend per share (DPS).

2. Market price of stock (MPS) on earning per share (EPS).

3. Dividend per share (EPS) on earning per share (DPS) of the sample banks. Following table shows the simple regression results of sample firms with the relationship between MPS, EPS and DPS.

4.1 Market Price per Share (MPS) on Dividend per Share (DPS)

The regression equation is,

$$MPS = a + b DPS$$

Following table shows the regression analysis of MPS on DPS;

Table 4.1
Simple Regression Analysis of MPS on DPS

Banks	Constant (a)	Coefficient of DPS (b)	R	R ²	SE _b
SCBL	6940.333	-39.278	0.397	0.157	40.646
NABIL	-1904.474	56.666	0.849	0.721	15.769
SBIL	553.586	7.209	0.121	0.015	41.905
EBL	298.8458	-98.508	0.662	0.439	64.308
HBL	1025.021	8.196	0.280	0.078	14.052

Source: Appendix VI

The above table shows the linear relationship between market price per share (MPS) and dividend per share (DPS). The regression line shows that MPS is the dependent variable and DPS is the independent variable. This analysis shows the change in the value of DPS affects MPS or not.

It is clearly seen from the above table that NABIL, SBIL and HBL have positive regression coefficient. On the other hand SCBL and EBL have negative regression coefficient. The positive regression coefficient indicates that increase in DPS will lead to increase in MPS, if other variables remain

constant. But in case of SCBL and EBL the MPS will decrease if the other things remain constant.

Above simple regression table indicates if other things remain constant, the regression coefficient of DPS (b) of NABIL, SBIL and HBL indicates that one rupee increase in DPS would lead to average increase in MPS by Rs. 56.666, 7.209 and 8.196 respectively. In the same way one rupee increase in DPS of SCBL and EBL would lead to average decrease in MPS by Rs. 39.278 and Rs. 98.508 respectively.

The regression constant (a) of all the banks indicate the average effect on dependent variable (MPS), if all the independent variables (DPS) are excluded from the model. The average MPS of SCBL, NABIL, SBIL, EBL and HBL will be Rs. 6940.333, -1904.474, 553.586, 298.8458 and 1025.021 respectively if the DPS will be zero.

The standard error of estimate (SEE) measures the variability of the actual values from its predictive values. The SEE of SCBL, NABIL, SBIL, EBL and HBL are 40.646, 15.769, 41.905, 64.305 and 14.052 respectively.

The coefficient of determination (R^2) measures the percentage of variation of dependent variable upon independent variable. The R^2 of SCBL 0.157 indicates only 15.7% of variation on MPS is caused by the explanatory variable and remaining 84.3% variation in MPS is caused by un-explanatory variable. The R^2 of NABIL 0.721 indicates only 72.1% of variation on MPS is caused by the explanatory variable and remaining 27.9% variation in MPS is caused by un-explanatory variable. The R^2 of SBIL 0.015 indicates only 1.5% of variation on MPS is caused by the explanatory variable and remaining 98.5% variation in MPS is caused by un-explanatory variable. The R^2 of EBL 0.439 indicates only 43.9% of variation on MPS is caused by the

explanatory variable and remaining 56.1% variation in MPS is caused by un-explanatory variable. The R^2 of HBL 0.078 indicates only 7.8% of variation on MPS is caused by the explanatory variable and remaining 92.2% variation in MPS is caused by un-explanatory variable.

4.2 Market Price per Share (MPS) on Earning per Share (EPS)

The regression equation is,

$$MPS = a + b EPS$$

Following table shows the regression analysis of MPS on EPS;

Table 4.2
Simple Regression Analysis of MPS on EPS

Banks	Constant (a)	Coefficient of EPS (b)	R	R^2	SE _b
SCBL	-7621.419	69.207	0.727	0.529	29.201
NABIL	-1582.525	35.886	0.747	0.558	14.293
SBIL	61.104	27.478	0.919	0.845	5.271
EBL	-776.880	36.670	0.936	0.876	6.171
HBL	271.405	14.367	0.647	0.419	7.564

Source: Appendix VI

The above table shows the linear relationship between market price per share (MPS) and dividend per share (EPS). The regression line shows that MPS is the dependent variable and EPS is the independent variable. This analysis shows the change in the value of EPS affects MPS or not.

It is clearly seen from the above table that all the sample banks have positive regression coefficient. The positive regression coefficient indicates that increase in EPS will lead to increase in MPS, if other variables remain constant.

Above simple regression table indicates if other things remain constant, the positive regression coefficient of EPS (b) of all the sample banks SCBL, NABIL, SBIL, EBL and HBL indicates that one rupee increase in EPS would lead to average increase in MPS by Rs. 69.207, 35.886, 27.478, 36.670 and 14.367 respectively.

The regression constant (a) of all the banks indicate the average effect on dependent variable (MPS), if all the independent variables (EPS) are excluded from the model. The average MPS of SCBL, NABIL, SBIL, EBL and HBL will be Rs. -7621.419, -1582.525, 61.104, -776.880 and 271.405 respectively if the EPS will be zero.

The standard error of estimate (SEE) measures the variability of the actual values from its predictive values. The SEE of SCBL, NABIL, SBIL, EBL and HBL are 29.201, 14.293, 5.271, 6.171 and 7.564 respectively.

The coefficient of determination (R^2) measures the percentage of variation of dependent variable upon independent variable. The R^2 of SCBL 0.529 indicates only 52.9% of variation on MPS is caused by the explanatory variable and remaining 47.1% variation in MPS is caused by un-explanatory variable. The R^2 of NABIL 0.558 indicates only 55.8% of variation on MPS is caused by the explanatory variable and remaining 44.2% variation in MPS is caused by un-explanatory variable. The R^2 of SBIL 0.845 indicates only 84.5% of variation on MPS is caused by the explanatory variable and remaining 15.5% variation in MPS is caused by un-explanatory variable. The R^2 of EBL 0.876 indicates only 87.6% of variation on MPS is caused by the explanatory variable and remaining 12.4% variation in MPS is caused by un-explanatory variable. The R^2 of HBL 0.419 indicates only 41.9% of variation on MPS is caused by the explanatory variable and remaining 52.1% variation in MPS is caused by un-explanatory variable.

4.3 Dividend per Share (DPS) on Earning per Share (EPS)

The regression equation is,

$$DPS = a + b EPS$$

Following table shows the regression analysis of DPS on EPS;

Table 4.3
Simple Regression Analysis of DPS on EPS

Banks	Constant (a)	Coefficient of EPS (b)	R	R ²	SE _b
SCBL	85.739	0.143	0.149	0.022	0.425
NABIL	3.752	0.654	0.908	0.824	0.135
SBIL	12.549	-5.92	0.126	0.016	0.330
EBL	25.357	-0.128	0.487	0.237	0.133
HBL	-5.495	0.400	0.540	0.292	0.311

Source: Appendix VI

The above table shows the linear relationship between dividend price per share (DPS) and earning per share (DPS). The regression line shows that DPS is the dependent variable and EPS is the independent variable. This analysis shows the change in the value of EPS affects DPS or not.

It is clearly seen from the above table that SCBL, NABIL and HBL have positive regression coefficient. On the other hand SBIL and EBL have negative regression coefficient. The positive regression coefficient indicates that increase in EPS will lead to increase in DPS, if other variables remain constant. But in case of SBIL and EBL the DPS will decrease if the other things remain constant.

Above simple regression table indicates if other things remain constant, the regression coefficient of EPS (b) of SCBL, NABIL and HBL indicates that one rupee increase in EPS would lead to average increase in

DPS by Rs. 0.143, 0.654 and 0.40 respectively. In the same way one rupee increase in EPS of SBIL and EBL would lead to average decrease in DPS by Rs. 5.92 and Rs. 0.128 respectively.

The regression constant (a) of all the banks indicate the average effect on dependent variable (DPS), if all the independent variables (EPS) are excluded from the model. The average DPS of SCBL, NABIL, SBIL, EBL and HBL will be Rs. 85.739, 3.752, 12.549, 25.357, and -5.495 respectively if the EPS will be zero.

The standard error of estimate (SEE) measures the variability of the actual values from its predictive values. The SEE of SCBL, NABIL, SBIL, EBL and HBL are 0.425, 0.135, 0.330, 0.133 and 0.311 respectively.

The coefficient of determination (R^2) measures the percentage of variation of dependent variable upon independent variable. The R^2 of SCBL 0.022 indicates only 2.2% of variation on DPS is caused by the explanatory variable and remaining 97.8% variation in DPS is caused by un-explanatory variable. The R^2 of NABIL 0.824 indicates only 82.4% of variation on DPS is caused by the explanatory variable and remaining 17.6% variation in DPS is caused by un-explanatory variable. The R^2 of SBIL 0.016 indicates only 1.6% of variation on DPS is caused by the explanatory variable and remaining 98.4% variation in DPS is caused by un-explanatory variable. The R^2 of EBL 0.237 indicates only 23.7% of variation on DPS is caused by the explanatory variable and remaining 76.3% variation in DPS is caused by un-explanatory variable. The R^2 of HBL 0.293 indicates only 29.3% of variation on DPS is caused by the explanatory variable and remaining 70.7% variation in DPS is caused by un-explanatory variable.

5 Multiple Regressions

5.1 Market price per share (MPS) on dividend per share (DPS) and earning per share (EPS)

The regression equation is

$$MPS = a + b_1 DPS + b_2 EPS$$

Following table shows the multiple regression analysis of MPS on DPS and EPS

Table 5.1
Multiple regression analysis of MPS on DPS and EPS

Banks	Constant (a)	Regression coefficients		F value	R ²	SEE
		DPS (b ₁)	EPS (b ₂)			
SCBL	-3237.323 (-0.846) [0.445]	-51.133 (-2.228) [0.026]	76.522 (3.470)* [0.090]	7.517*	0.790	891.42
NABIL	-1826.151 (-1.447) [0.221]	64.936 (1.554) [0.195]	-6.559 (-0.218) [0.838]	5.250	0.724	979.23
SBIL	17.020 (0.193) [0.856]	11.058 (1.762) [0.153]	25.776 (5.695)* [0.005]	20.859*	0.913	114.82
EBL	-853.948 (-2.207) [0.092]	5.164 (0.430) [0.690]	36.816 (5.451)* [0.006]	14.871*	0.881	302.59
HBL	289.494 (0.527) [0.626]	1.322 (0.106) [0.921]	13.703 (1.301) [0.263]	1.453	0.421	327.65

Value in () = t-value at 5% level of significance

Value in [] = t significance

** = significant at 5% level of significance*

From the above multiple regression table 5.1 it is obtained that all the sample banks SCBL, NABIL, SBIL, EBL and HBL have multiple regression constant of -3237.323, -1826.151, 17.020, -853.948, and 289.494

respectively. It indicates if DPS and EPS are kept zero, the MSP of SCBL, NABIL, SBIL, EBL and HBL would be Rs. -3237.323, Rs. -1826.151, Rs. 17.020, Rs. -853.948, and Rs. 289.494 respectively.

in MPS by Rs. 64.936, Rs. 11.058, Rs. 5.164 and Rs. 1.322 respectively while other variable EPS is kept constant.

Similarly, for the sample banks SCBL, SBIL, EBL and HBL, one rupee increase in EPS will lead to the average increase of MPS by Rs. 76.522, Rs. 25.776, Rs. 36.816 and Rs. 13.703 respectively. But for the sample banks NABIL, one rupee increase in EPS will lead to average decrease in MPS by Rs. 6.559 while other variable DPS kept constant.

The multiple coefficient of determination (R^2) measures the percentage of variation of dependent variable upon independent variables. HBL has the lowest R^2 and SBIL has the highest R^2 . The R^2 of SCBL 0.790 indicates only 79.0% of variation on MPS is caused by the explanatory variables (DPS and EPS) and remaining 21.0% variation in MPS is caused by un-explanatory variables. The R^2 of NABIL 0.724 indicates only 72.4% of variation on MPS is caused by the explanatory variables (DPS and EPS) and remaining 27.6% variation in MPS is caused by un-explanatory variables. The R^2 of SBIL 0.913 indicates 91.3% of variation on MPS is caused by the explanatory variables (DPS and EPS) and the remaining 8.7% variation in MPS is caused by un-explanatory variables. The R^2 of EBL 0.881 indicates only 88.1% of variation on MPS is caused by the explanatory variables (DPS and EPS) and remaining 21.9% variation in MPS is caused by un-explanatory variables. The R^2 of HBL 0.421 indicates only 42.1% of variation on MPS is caused by the explanatory variables (DPS and EPS) and remaining 57.9% variation in MPS is caused by un-explanatory variables.

The t-values of EPS for SCBL, SBIL and EBL are significant at 5% level of significance whereas it is reported insignificant for NABIL and HBL hence dividend is stronger than retained earnings to explain variation in stock price.

The F-statistics for the regression of SCBL, SBIL and EBL are significant at 5% level of significance and hence indicate that the regression equations provide statistically significant explanation of variations in stock price, while the F-statistics is not significant at 5% level of significance for NABIL and HBL.

Considering the above regression model, $MPS = a + b_1 DPS + b_2 EPS$ and the above explanations, it can be inferred that the coefficients of DPS are very high in comparison to EPS. This indicates that there is positive relationship between dividend and stock price and dividend have predominant influence.

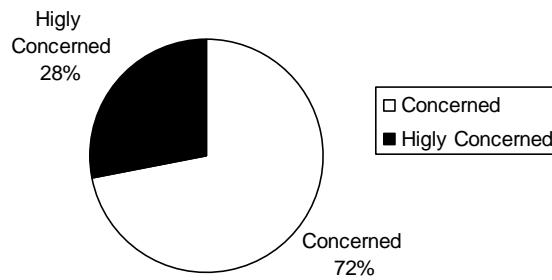
6. was used where appropriate. While ranking starting number is assumed as top prioritized and the last number imparted for the query is assumed as least prioritized. Where the ranking is not possible or not necessary, simple objective (Yes/No) questions are used. Classification of the respondents is supported with graphical and tabular presentations where appropriate.

Q. How much do you concern with dividend aspect?

This question was intended to find out the weight given by the companies to the formulation of dividend policy as a part of dividend decision. The views of the companies were not much differentiating regarding this query almost all of the respondents showed their concern

regarding dividend. The classification of views of the respondents is shown in figure as follows.

Figure 6.1
Dividend Aspects of Respondents

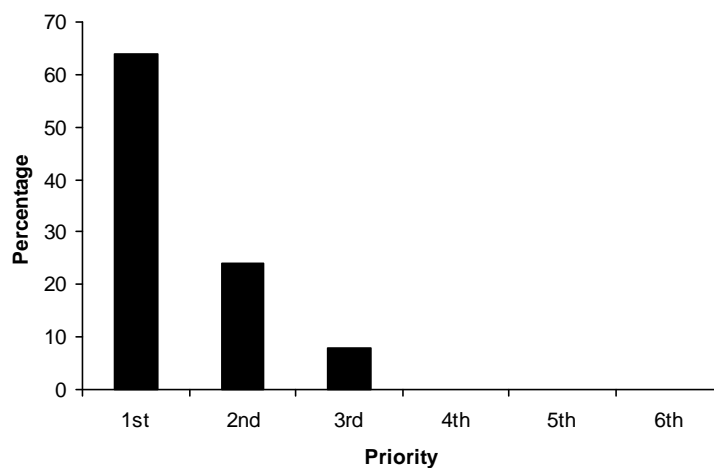


Q. Which three factors do you consider most while forming dividend policy?

This question was intended to find out the weight given to the firm while forming dividend policy. The result given by respondents is show in figure as follows.

Figure 6.2

Priority Among Various Factors



1st Priority = Earnings

2nd Priority = Liquidity

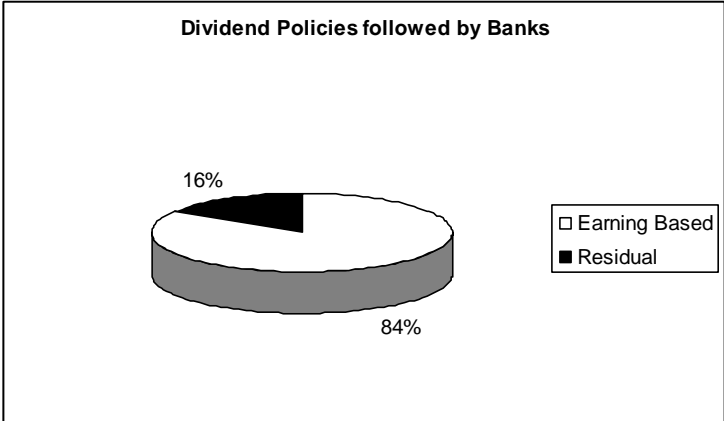
3rd Priority = Last years dividend

Majority of the respondents (68%) gave first priority to earnings, second priority to liquidity or availability of cash (24%) and the respondents least priority (8%) to the last years dividend.

Q. Among the various dividend policies, which policy does your company follow?

This question was intended to find out the dividend policies made by the company. Majority (84%) followed earning based dividend while minority (16%) followed residual dividend policy.

Figure 6.3

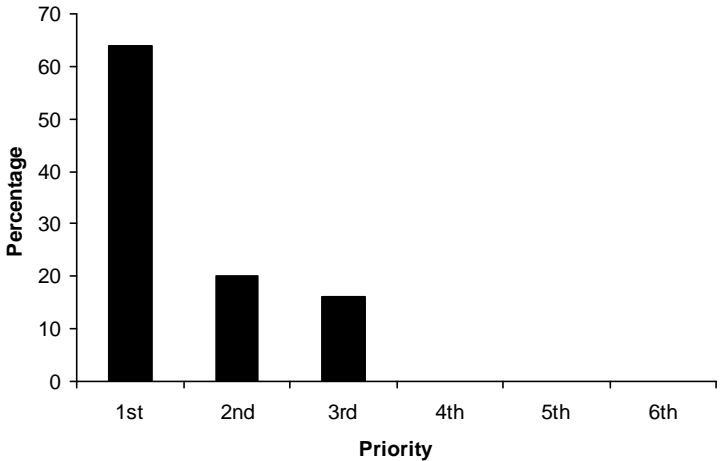


Q. Will you rank the following motives of stock dividend?

This question was intended to find out motives of stock dividend paid by the banks. Respond regarding this query is as follows.

Figure 6.4

Priority Among Motives of Stock



1st Priority = Converse cash

2nd Priority = Indicate higher future profit 3rd Priority = Raise future dividend

The majority of the respondents gave the first importance (64%) to converse cash, the second importance to indicate higher future profits is 20% and remaining 16% is to raise in future dividends.

Q. Do you suggest for stock split in order to wealth maximization of shareholders?

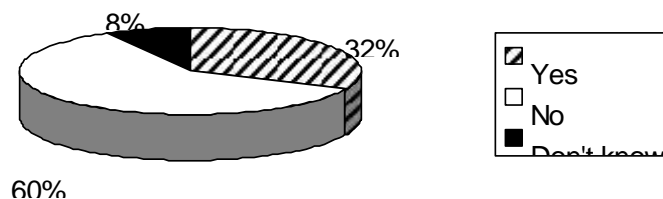
All the respondents gave answer in no. They said stock split cannot maximize the wealth of shareholders.

Q. In Nepal share repurchase is not allowed. Do you think that this kind of legal restriction should continue to prevail?

With respect to legal restriction on share repurchase 60% of the respondents felt that this kind of legal restriction on share repurchase should not continue to prevail and 32% of the respondents stated that such restriction on share repurchase should continue to prevail and rest 8% opined they don't know whether legal restriction on share repurchase should continue to prevail or not.

Figure 6.5

Opinion to Legal Restriction to Share Repurchase



Q. Do your bank has consistent dividend policy?

56% of the respondents answered that they do not have consistent dividend policy whereas 44% of the respondents answered that they do have consistent dividend policy.

Q. Do you take into account the shareholders expected return, while forming dividend policy?

This question was intended to find out the concentration about the shareholders interest. All of the respondents take into account the shareholders expected return by considering the risk.

Q. What kind of dividend does your company distribute?

This question was presented to find out the type of dividend distributing by the companies. The view of the companies was not differentiating, majority (88%) responds was towards cash dividend and minority (12%) responds were towards cash and stock dividend.

Major Findings

Dividend refers to the portion of firm's net earning which are paid out of the shareholders in return to their investment. Dividends serve as a simple, comprehensive signal of management's interpretation of the firm's recent performance and its future prospects of paying dividend to shareholders in an effective way to attract new investors to invest in shares.

The major findings obtained from the general and some specific analysis of secondary data of sample banks are as follows.

A. Findings of Descriptive Analysis

- ✓ From the descriptive analysis, it is found that there is not any consistency or uniformity in dividend policy of the sample banks.

It has indicated the need of dividend strategy as well as the need of proper analysis of the respective sector of the banks.

- ✓ Most of the Nepalese firms from the very past do not have profit planning and investment strategy which has imbalanced the whole position of the firms. It means there is not consistency even in the earnings.
- ✓ The MPS has affected by the financial position and the dividend paid by the firms, in this regards the MPS of the sample firms is to be fluctuated. It denotes Nepalese investors are not treated fairly.
- ✓ The lack of financial knowledge and the market inefficiently has affected the market price of the share in all the firms.
- ✓ The investment behaviour of investor on the market has also been affecting to market price of the share.
- ✓ The information conveyed by the banks is also affecting to the market price of share.
- ✓ Rumours about the MPS among the investor is also affecting to the market price of share.
- ✓ Due to the investment behaviour pattern of share broker that is also affecting to the market price of share.

B. Findings of Financial Indicator Analysis

- ✓ average EPS. The S.D. of EPS shows EBL is less consistent and SBIL is more consistent. The C.V. of MPS shows the highest degree of fluctuation of SBIL and the lowest degree of fluctuation of SCBL.
- ✓ DPS of all the sample banks are seen in fluctuating trend. The average DPS of SCBL is the highest than that of other sample banks. SBIL has the lowest average DPS. The S.D. of MPS shows SCBL is less consistent and SBIL is more consistent. The C.V. of DPS shows

the highest degree of fluctuation of SBIL and the lowest degree of fluctuation of SCBL.

- ✓ The average D/P ratio of SCBL is the highest than that of other sample banks. HBL has the lowest average D/P ratio.

C. Findings of Correlation Analysis

- ✓ There is positive correlation between MPS and DPS of all the sample banks. The correlation coefficient (R) of SCBL, NABIL, SBIL, EBL and HBL are 0.397, 0.849, 0.121, 0.662 and 0.280 respectively. It indicates MPS of all the sample banks increases if DPS is increased and vice versa. The positive correlation between MPS and DPS for the sample bank NABIL is reliable because the evidence is significant as $R > 6 \text{ PE}$. But the positive correlation between MPS and DPS for the sample banks SCBL, SBIL, EBL and HBL is not reliable because the evidence is insignificant as $R < 6 \text{ PE}$.
- ✓ There is positive correlation between MPS and EPS of all the sample banks. The correlation coefficient (R) of SCBL, NABIL, SBIL, EBL and HBL are 0.727, 0.747, 0.919, 0.936 and 0.647 respectively. It indicates MPS of all the sample banks increases if EPS is increased and vice versa. The positive correlation between MPS and EPS for the sample banks SCBL, NABIL and EBL is reliable because the evidence is significant as $R > 6 \text{ PE}$. But the positive correlation between MPS and EPS for the sample banks SBIL and HBL is not reliable because the evidence is insignificant as $R < 6 \text{ PE}$.
- ✓ There is positive correlation between DPS and EPS of all the sample banks. The correlation coefficient (R) of SCBL, NABIL, SBIL, EBL and HBL are 0.149, 0.908, 0.126, 0.487 and 0.540 respectively. It indicates DPS of all the sample banks increases if EPS is increased and vice versa. The positive correlation between DPS and EPS for the

sample bank NABIL is reliable because the evidence is significant as $R > 6$ PE. But the positive correlation between DPS and EPS for the sample banks SCBL, SBIL, EBL and HBL is not reliable because the evidence is insignificant as $R < 6$ PE.

D. Findings of Hypothesis Test

- ✓ There is correlation between MPS and DPS of NABIL whereas remaining sample banks SCBL, SBIL, EBL and HBL do not have correlation between MPS and DPS.
- ✓ There is correlation between MPS and EPS of SBIL and EBL whereas remaining sample banks SCBL, NABIL and HBL do not have correlation between MPS and EPS.
- ✓ There is correlation between DPS and EPS of NABIL whereas remaining sample banks SCBL, SBIL, EBL and HBL do not have correlation between DPS and EPS.

E. Findings of Regression Analysis

- ✓ The relationship between MPS and DPS of the sample banks SCBL and EBL is negative, which indicates MPS increases if DPS is decreased and vice versa. On the other hand the relationship of the sample banks NABIL, SBIL and HBL is positive, which indicates MPS increases if DPS is increased and vice versa. In the same way the coefficient of determination (R^2) of the sample banks SCBL, NABIL, SBIL, EBL and HBL is 0.157, 0.721, 0.015, 0.439 and 0.078 respectively, which indicates the percentage of dependency of MPS upon DPS.
- ✓ The relationship between MPS and EPS of all the sample banks is positive, which indicates MPS increases if EPS is increased and vice versa. In the same way the coefficient of determination (R^2) of the

sample banks SCBL, NABIL, SBIL, EBL and HBL is 0.529, 0.558, 0.845, 0.876 and 0.419 respectively, which indicates the percentage of dependency of MPS upon EPS.

- ✓ The relationship between DPS and EPS of the sample banks SBIL and EBL is negative, which indicates DPS increases if EPS is decreased and vice versa. On the other hand the relationship of the sample banks SCBL, NABIL and HBL is positive, which indicates DPS increases if EPS is increased and vice versa. In the same way the coefficient of determination (R^2) of the sample banks SCBL, NABIL, SBIL, EBL and HBL is 0.022, 0.824, 0.016, 0.237 and 0.292 respectively, which indicates the percentage of dependency of DPS upon EPS.
- ✓ From the multiple regressions analysis it is found that DPS has strong influence on MPS than of EPS. The sample banks SCBL has negative relationship of DPS upon MPS, which means MPS will decrease if DPS is increased keeping other variables constant and vice versa. But other remaining sample banks have positive relationship, which means MPS increases if DPS is increased keeping other variables constant and vice versa. In the same way the sample bank NABIL has negative relationship of EPS upon MPS, which means MPS will decrease if EPS is increased keeping other variables constant and vice versa. But other remaining sample banks have positive relationship, which means MPS increases if EPS is increased keeping other variables constant and vice versa.

t-values of EPS for SCBL, SBIL and EBL are significant at 5% level of significance whereas it is reported insignificant for NABIL and HBL hence dividend is stronger than retained earnings to explain variation in stock price. The F-statistics for the regression of SCBL, SBIL and EBL are significant at 5% level of significance and hence indicate that the regression equations provide statistically significant

explanation of variations in stock price, while the F-statistics is not significant at 5% level of significance for NABIL and HBL.

The multiple coefficient of determination (R^2) of the sample banks SCBL, NABIL, SBIL, EBL and HBL is 0.790, 0.724, 0.913, 0.881, 0.421 respectively, which indicates the collective dependency of MPS upon the explained variables DPS and EPS.

F. Findings of Primary Data Analysis

- ✓ All the sample banks gave the importance for dividend decision.
- ✓ Majority of the banks paid cash dividend but some times they can pay stock dividend whenever cash is scarce. Sometime both cash and stock dividend is paid.
- ✓ As regards to dividend as a residual decision, majority of the company feel that it is not a residual decision.
- ✓ With respect to factor affecting dividend policy the respondents gave first priority to earning, second priority to liquidity and third priority to past dividend.
- ✓ Management considers the shareholders expectation while distributing the dividend.
- ✓ With respect to the stock split for maximization of wealth, all of the banks said that the stock split can not maximize the wealth of shareholder. So they suggested not splitting the stock.
- ✓ With regards to the legal restriction on share repurchase, majority of the respondents felt that such restriction should continue to prevail.
- ✓ Most of the banks do have consistent dividend policy.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY

Dividend is the portion of a firm's net earnings that is distributed by the firm in terms of cash, shares and other form of earning to the shareholders for their investment in share capital. Generally dividend is distributed to common stock holders. The objective of dividend policy is to maximize the common stockholders return so that value of their investment is maximized. Return consists of two components, dividend and capital gain. Dividend policy has direct influence upon these components. So dividend policy of the firm is crucial area of financial management. The important aspect of dividend policy is to determine the amount of earning to be distributed to shareholders and the amount to be retained in the firm.

Every investor expects handsome earning on their investment in share capital. The firm that is not able to distribute fair dividend will not be able to raise further equity capital from capital market. Hence dividend should be distributed regularly to attract more funds and for this matter firms need suitable dividend policy. Dividend policy may be affected by different factors such as earnings of the firm, liquidity position of the firm, net worth etc. These factors indicate the financial position of the company. If the firm has good performance in terms of these factors it will be able to provide return in form of dividend.

In Nepal, only few listed commercial banks have been paying regular dividend to their shareholders. Moreover some banks have not been following stable dividend payout policy. On the other hand the dividend payout ratio of listed companies in Nepal has not been able to distribute fair dividends.

This study is mainly focused to assess the dividend policy and fluctuations in market price of share. It covers some specific objectives

1. To explore the dividend policy followed by Nepalese commercial banks.
2. To analyse the relationship between dividend policy and stock price.
3. To explore the factors affecting market price of stock.

The study is based on primary as well as secondary data related to dividend policy. Primary data has been collected by field observation and making a questionnaire. The secondary data have been gathered from the annual reports of the concerned banks.

In order to achieve the objectives of the study, various financial and statistical tools have been used. Various analyses are conducted to find out the appropriate relationship between dividend and other variables that may affect dividend and the stock price. To analyze the relationship, out of the 15 listed commercial banks five sample banks are selected from the period of 2000/01 to 2006/07.

At first the data are analyzed using the financial tools to find out MPS, DPS, EPS and D/P ratio then after statistical tools are used to find out their average, standard deviation and coefficient of variation. Furthermore to analyze the relationship between the aforementioned variables correlation analysis, hypothesis test, simple regression analysis and the multiple regression analysis are conducted. From the correlation analysis the relationship between MPS and DPS, MPS and EPS and DPS and EPS are found out. Significance of the relationship is tested by using PE and their reliability is tested by using t-test at 5% level of significance. Then the effect of one variable (independent) on another variable (dependent) is analyzed by using simple regression analysis by using the models' $MPS = a + b DPS$, $MPS = a + b EPS$, $DPS = a + b EPS$. From simple regression analysis

individual impact of independent variable is found out upon dependent variable by calculating coefficient of determination (R^2). Finally the data are analyzed by using multiple regression analysis to find out the collective effect of all the independent variables upon a single dependent variable by using the model $MPS = a + b_1DPS + b_2DPS$ and their ANOVA test is also conducted at 5% level of significance to test the reliability of relationship.

CONCLUSION

Paying dividend to shareholders in an effective way to lure new investors to invest in share. An appropriate dividend policy is a must to have balance between shareholders interest and the corporate growth from internally generated fund. From the above findings it can be concluded that there is not any consistency in the dividend policy of sample banks. No specific dividend payment strategy is followed by all the sample banks. Sample banks have average earnings, which can be considered satisfactory but some banks are paying high dividend and some are paying low. The market price of share is affected more by the dividend policy. No matter, whether the banks are having more earnings or low and have greater net worth per share or low that has not greater influence on stock price as compared to the influence of dividend policy on fluctuation on market price of share. There are many un-explanatory variables that affect to the volatility of market price of stock. So, it can be concluded that although EPS affect DPS, but are less concerned with MPS. Hence MPS is more or less dependent upon DPS in the efficient capital market. Also there are other non financial factors that affect market price of share such as lack of public awareness, high liquidity, speculation, manipulation of stock price, expectation of bonus share, political instability etc. all these factors should also be considered.

RECOMMENDATON

On the basis of the findings following recommendations can be made for the further applications of dividend policy to have strong MPS in the market.

- ✓ All financial institutions should clearly define the dividend policy.
- ✓ Formulation of dividend policy will clearly guide the way on how to follow dividend distribution strategy. The policy should determine whether the company is going to adopt stable dividend policy, constant payout ration or low regular plus extra dividend.
- ✓ The practices of dividend payment should be adopted by the companies. In cases small amount of dividend are paid without considering the risk free rate of return. The financial institution should consider the shareholders expectation as far as possible.
- ✓ Earning per share of all sample banks are in fluctuating trend, therefore the banks should search the fruitful investment opportunities and plan for maximization of shareholders wealth.
- ✓ The correlation between MPS and DPS of sample banks is positive so they should increase the DPS to uplift the MPS.
- ✓ Some sample banks do not have consistent dividend payment compared to others so such banks should try paying reasonable dividend each year because higher DPS create positive attitude of shareholders towards banks, which consequently helps to increase market value of the share.
- ✓ As DPS has greater influence upon MPS than other variables hence to improve the MPS sample banks it is better to increase the DPS.
- ✓ The information conveyed by the bank may have influence on the stock price therefore banks are suggested to convey the fact and reliable information to the public.

- ✓ Market price of stock may be affected due to lack of proper knowledge to the investors about the market; hence investors should have proper knowledge about market.
- ✓ The shareholders should be well informed by the management about the dividend policy. More specifically whether cash or stock dividend is fruitful for them since stock dividend decreases market value of stock and earning per share.
- ✓ There is no consistency in the dividend payout behaviour in many cases; for example, small amount of dividend has been paid despite sufficient earnings without considering the rate of return. Further the price of share seems to increase even in years when the dividend was not paid. This is result of market imperfection. To overcome this undesired situation, government, Nepal Rastra Bank and stock exchange should work together.
- ✓ Most of the banks seem to ignore the dividend expectation of the minority shareholders. It seems necessary to be organized to promote and protect shareholders right as regard to dividend.
- ✓ The organizations formed by conscious shareholders like 'Shareholders Association of Nepal' should be encouraged to work against the management ignorance.
- ✓ Due to lack of information about securities market, the potential investors are not stimulated properly. So, seminars and workshops should be organized and information should be delivered to shareholders as well as potential investors to develop efficient securities market in Nepal.