CHAPTER-II

Introduction

1.1 Background of the Study

Nepal is a country trying to step out from the political instability since a long time period and trying to develop its economy through globalization. Development in the financial term is the efficient flow and generation of the funds in the most productive sectors. The nation is having effective fund collected from every corners of the country and investing in the productive areas can be taken as the good signal of economic development. Similarly, the security against the risk can be taken into consideration while making investment. Therefore the two basic and important elements for an investment are fund as well as security.

Dividend policy remains 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 influence stock price and is a proxy for the future earnings. A number of theoretical mechanisms have been suggested that cause dividend yield and payout ratio to vary inversely with common stock volatility. These are duration effect, rate of return effect, arbitrage pricing effect and information effect (Nishat and Irfan, 2004, P- 2).

Agency cost argument, as developed by Jenson and Mecking (1974) proposed that dividend payments reduces costs and increases cash flow, that payment of dividends motivates managers to disgorge cash rather than investing at below the cost of capital or wasting it on organizational in efficient. Some author has stressed the importance of information content of

dividend. Thriller and Rock 1985, suggested that dividend announcements provides the missing piece of information about the firm and allows the market to estimate the firms current earnings. Investors may have greater confidence that reported earnings reflect economic profits when announcements are accompanied by ample dividends. If investors are more certain in their opinions, they react less to questionable some of information and their expectation of value may be insulated from irrational iNFCuence. (Nishat and Irfan, 2004, P- 3).

Reforms introduced in the financial sector of Nepal over past years including liberalization of interest rates, creation of a basic-regulatory framework and development of longer term government securities market have led to some significant improvement in the financial sector, like in other sectors, active participation of private sector in financial sector will play an important role in the economic development of the country. In order to achieve the role of this sector in economic activities, it is essential to flow financial resources easily and in a simple manner, which would, in turn help to achieve desired results from the economic development. Though the present development and expansion of financial sector like commercial banks, finance company etc are directed towards the same objectives, the country has not been able to realize the desired outcomes. For this, there might be various responsible causes; one of them is the poor capital market condition. The capital market of Nepal is small and it is a early stage of growth. There is a problem of asymmetric information between management of newly established Nepalese companies and Nepalese investors who have poured their funds there in.

In a capital market, all firms operate in order to generate earnings, shareholders supply equity capital hoping to share in these earnings either directly or indirectly. When a company payout a portion of its earnings to shareholders in the form of dividend, the shareholders benefit directly, if instead of paying dividend, the firms retains the funds to exploit other growth opportunities, the share holders can expect to benefit indirectly through future increase in the price of their stock. Thus shareholder's wealth can be increased through either dividend or capital its profits gains. The policy of a company on the division of its profit between dividend and retention is known as dividend policy. All aspects and question related to payment of dividend are contained in a 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 determine the amount of retained earnings available after payment of dividend. (Bhattari, 2004, P- 2)

At present in Nepal so many finance companies are performing their financial activities. The investment in the financing sector is in the stage of growth. Finance companies are more effectively working than other financial institution. It is because the finance companies have highly skilled personnel, modern financing services, management skills, quick and prompt services, international network and country suited services.

Nepal Stock Exchange, in short NEPSE is a non-profit organization operating under Securities Exchange Act 1983. NEPSE opened its trading floor on 13th January 1994. Members of NEPSE are permitted to act as intermediates in buying and selling of government bonds and listed

corporate securities. At present, there are 27 member brokers and two market maker who operate on the trading floor as per the securities Exchange Act 1983, rules and byelaws. (WWW. Nepal Stock. com.)

Despite the fact that only few finance companies are paying dividend regularly, there is also growing practice of paying stock dividend among some Nepalese companies. It is said that when the firms need to retain a high percentage of earnings, they issue stock dividend .So that the shareholders are content. At an alternative form of dividend is share repurchase. If a firm has surplus cash, it may choose to buy back some of its own share. In the developed capital market, corporations are allowed to buy back share and better utilize unused cash. However, Nepalese Company Act, 1997, section 47 has prohibited company from purchasing its own share before. But in now, they are allowed to buy back its own shares.

Market price of the stock (MPS) is the trading price of the stock listed in authorized or legal stock exchange. (Adhikari, 2002, P-5). In context of Nepal, MPS is the price that is coated for purchasing or selling under Nepal stock Exchange Act or related laws and regulations on the stock exchange floor.

MPS is that value of stock, which can be obtained by a firm from the market. Market value of a share is one of the variables, which is affected by the dividend per share and earnings per share of the firm. The issue of how much a company should pay its shareholders dividend is one that has concerned managers for a longtime. It has often been pointed out that a company that raises its dividend often experiences an increase in its stock price and that a company that lowers its dividend has a falling stock price. This seems to suggest that dividend do matter (Adhikari, 2004, P- 3). In that

they affect stock price. But this causal relationship has been refuted by several researchers on the grounds that dividend per share do not affect stock prices rather it is the informational content of dividend, that affect stock prices (Rao, 1992, P- 448) thus there should be no direct link between dividend and stock prices (Ross 1977) have argued that dividend policy could be viewed as a signaling mechanism whereby firms with profitable projects are able willing to pay higher dividends in order to segregate themselves from firm with loss profitable projects (Adhikari, 2002, P- 3).

Generally dividend policy and MPS has always positive correlation. If the company pays high dividend, the MPS increase and vice versa. But in some cases out of this interrelation, the price may remain constant or decrease too. Therefore, the information lack or flow is also vital in the analysis of MPS.

1.2 Focus of the Study

The main focus of the study is to measure the practices made by the Nepalese finance companies regarding the dividend policy. Moreover, it is also intended to examine the dividend policy and stock price volatility of concerned finance companies taking related variables into consideration. This study is going to be done on how much stock price will be volatile with respect to changes in dividend policy. For this purpose the relationship between related variables i.e. EPS, DPS, dividend payout ration, dividend yield and MPS will be separately and combine analyzed with view to state particular suggestion.

1.3 Statement of Problem

Dividend policy remains a source of controversy despite years of theoretical and empirical research including one aspect of dividend policy: the linkage between dividend policy and stock price volatility. Also in case of Nepal, some studies have been carried out to understand the relationship between the dividend policy and stock price volatility till now data. But it is not being sufficient for obtaining the information regarding the dividend policy and stock price volatility.

In the context of Nepal, firms have followed some kinds of dividend policy but of course, with an adhoc trend. That is the reason; it can be said that dividend policy is not matching with earning made by the firms. Some experts believe that there is positive relationship between dividend policy and market price of stock but others believes no relation at all.

In Nepalese perspective many investor are investing in the share market without having effective analysis of the companies. So investment patterns of investor have also been affecting to market price of stock. Stock price increase with announcement of dividend although the firm announcing dividend might be of undercapitalized.

In Nepal, there are only few companies that pay dividends to shareholders. Some companies have paid the high dividend even though they have a low stock price and some companies still have high stock price although they have not paid dividends constantly. So, the relation between dividends policy and stock price volatility established by much finance scholars needs to be tested in the Nepalese perspective. Therefore the main focus of this study is to deal with the following problems so far it will possible to cope with.

1. Does the dividend policy lead to volatility of stock prices?
2. Is it really affecting to the stock price with investment pattern of investor?
3. What are the reasons behind stock price increasing after the announcement of dividend?
4. What sort of dividend policy is being followed by the Nepalese finance companies?
5. Is there is any uniformity among the finical companies while distributing the dividend?

1.4 Objectives of the Study

i. To examine the infuence of dividend policy on stock price volatility.

ii. To explore the factors affecting in Stock price Per Share

iii. To analyze whether only dividend policy have infuuence on volatility of stock price.

iv. To provide the reliable and relevant suggestion on the basis of findings.

v. To analysis the relationship of financial indicator such as DPS, MPS, DPR, DY.

1.5 Significance of the Study

Generally dividends make tempt investor to invest in a particular share. So dividend policy has a significance 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. Share holders and investor may also be benefited from this study. Moreover, this study will support the future researcher by providing valuable information. Specifically the importance of this study can be pointed out below:-

i. This analysis will help investor and share holders to know about the relationship between the dividend policy and stock price volatility.
ii. It will be the milestone for the management and policy maker to set and formulate suitable dividend policies.
iii. To raise the public awareness about dividend policy and market price of share relation in order to help for taking rational decision of their investment.
iv. This study will help the investor and shareholders to know the others factors affecting share price along with dividend policy.

1.6 Limitation of the Study

1. Most of data used in the research are of secondary data. So reliability of this analysis depends upon the pooled secondary data.
2. All the data are based on fiscal year 060/61to064/65.
3. Among the different aspects of dividend policy only cash dividend is taken for the analysis.
4. The study is concerned with only the listed finance companies of Nepal.
5. The Sample consists of only four finance companies
6. There is a time and resources constraint in this study.

1.7 Organization of the Study

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Research Methodology

Chapter 4: Data Presentation and Analysis

Chapter 5: Summary, conclusion and Recommendation

CHAPTER-II

REVIEW OF LITERATURE

2.1 A 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 behavioral models have also come out in course of time, attempting to categorize, explain and measure the different types of observed dividend behavior. (Mahapatra and Sahu, 1993, P- 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 earning is 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 plugging 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 in investment programs. (Adhikari, 1999,)P-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 a 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, P-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 investor's attitudes. Therefore dividend policy is one of the critical decisions related to maximize the value of firm's common stock.

2.2 Historical background of financial Companies:

Financial activities play a caracal role in the development of every nation's economy. Today the world is dominated by the impacts of global recession which affects the development of nation. Globalization drastic development of information technology, open market policy has synchronized the world economy into one economy. Economic liberalization policy has created a favor environment for an open international market and establishment, growth and development financial and non financial

institution.

Finance Companies are specialized financial institution that supplies credit for the purchase of consumer goods and services by purchasing the time sale contract of merchants or by granting small loans directly to costumers**.** Finance companies are established with the objectives of collecting capital scattered in the various parts of the country with the medium of non financing activities. Unlike a finance company, it does not receive deposits, but rather obtains its financing from the banks, institutions and other sources'

The growth of banking has taken place in the world since the decade of 1960s.Initial step to organized financing services organized from the establishment of the first investment bank began in Philadelphia, USA in 1764. The first commercial bank ,The completely government owned company called' Nepal Housing and Development Finance Company" which came into operation in 1992AD only after the first amendment in act in 2049BS, After then ,Nepal finance and saving company limited got license from NRB in 1993putting its name as the first finance company to be operated from private sector .Gradually ,Finance companies started operating with 1 in 1992, 7 in 1993,2 in 1994,17 in 1995,6 in 1996,6in1997,2in1998,1in1999,2in2000,1in2001,5in2002,5in2003,4in2005, 9in2006,and 9in2006and9in2007 with total of 77 finance companies operating till 2009.Out of 77 finance companies have head office outside Kathmandu valley.

Moreover in Bhadra2052BS, with a crew to protect the common interest of the members and to encourage collection and mobilization of scattered saving and its utilization in productive industrial sectors by

creating favourable investment environment to help the support in growth in the members within the country, Nepal finance companies Association (NFCA) a purely non-profit

Voluntary organization of the finance companies was legally established. The association has been providing common platform to the members for raising various relevant issues like development credits and norms to determine quality grading of finance companies, undertaking complementary approach to growth among the companies through mutual interest, improving the credibility of the companies and also taking the public matter seriously that the companies have to be profitable for rewarding the shareholders according to their expectations.

2.3 Evolution of the finance company in Nepal

Financial companies are essential factors for the process of economic development and to achieve economy growth and prosperity, finance companies provide prospect for the expansion of employment and income. More than that, it generates innovation and technological changes that bring about shifts in the production frontier, there by accelerating growth and factor productivity. Development of financial sectors is equally essential for the rapid economic development of the country.Nowadays finance companies play a vital role for the development of nation as well as for the world's economy .Although the history of finance companies in Nepal is not long, it has taken a long way to come at present situation. Ana prime Minister Anodic Singh established'Tejatra Adda" which started financial activities in Nepal on 1993BS.but actual financial activities started only after the establishment of "Nepal Bank Limited" in 1937BS.After some years ,NRB was established in 1956 as the central bank of Nepal,NRB had to

engage itself in removing the dual currency system by the process of establishing value of domestic currency, financial infrastructure, initiating developing activities and promote banking and financial system by providing financial and legal facilities. In 1935, a development agency was constituted under the name of “udyog Parishad”which was responsible for accelerating the development of industrial and commercial activities in the country. Immediately in 1936, Nepal company act was formulated. Therefore small, medium and large scale companies were established during the short period. A Country cannot achieve a better position without proper development in trade and industries. Thus, financialization and commercialization of financial structures a critical role in overall development of the nation as well as for the international economy.It is obvious that economic development of the country heavily depends upon the financial sectors, indeed the percentage of the extent may differ from country to country. A developing country needs continuous does of investment and this in turn requires money, in term of cash and credit supply. In a situation when existing financial institutions ,especially commercial bank are unable to carry capital market activities and also not in the position to meet consumers need for credit ,today a noticeable extent, this function is born e by finance companies. They are providing required amount of funds for the development of the economy. In a under developed country like Nepal, economic development can be brought with the help of savings of common people and through proper utilization of funds.

After the political change in Nepal on 2047BS the economic liberalization, the government for industrialization has followed privatization and globalization. This policy given more emphasis to the

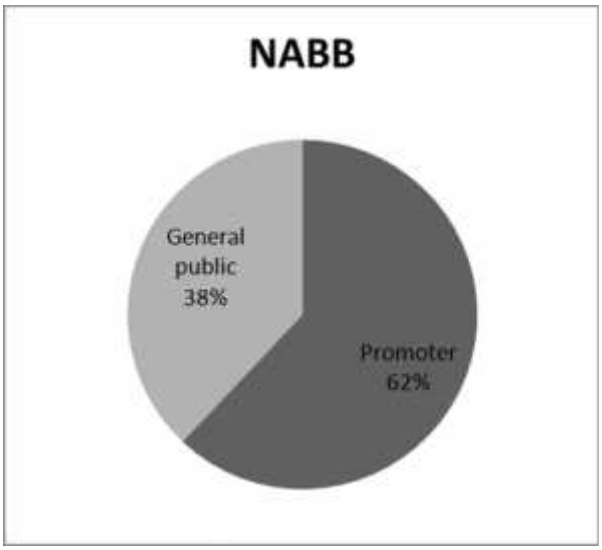
private sector encouraging factor of sustainable economic growth the new policy has already resulted in the establishment of joint venture as well as private banks and finance companies .The policy of economic liberalization and globalization adopted by the government of Nepal will continue to evoke response from the industrial, financial and commercial sector of the country. Still much more has to be done in making financial system as an effective intermediate for mobilization of domestic savings in productive sectors.

The formulation of effective monetary strategy and reformation programs of the financial system in the country can make an important contribution in mobilization of more domestic resource as well as to finance required funds needed for economic expansion. Therefore, more emphasis should be given to an efficient monetary arrangement and reformation of the financial system that is conductive to the proper growth of financial system in Nepal.

1) Nepal Awas Bikas Bitta Co

Nepal Awas Bikas Bitta Co.ltd was established in 1989(2046) under finance co act 2042.It is the first finance company in Nepal which completely focuses on the housing sector. It grants various types of loan for various purposes like improving the existing housing arrangement, launching new housing schemes, supplying housing loan facilities and other housing related services in order to meet the growing demand for housing in Nepal. It is located in new Baneshwor. The shareholder pattern is

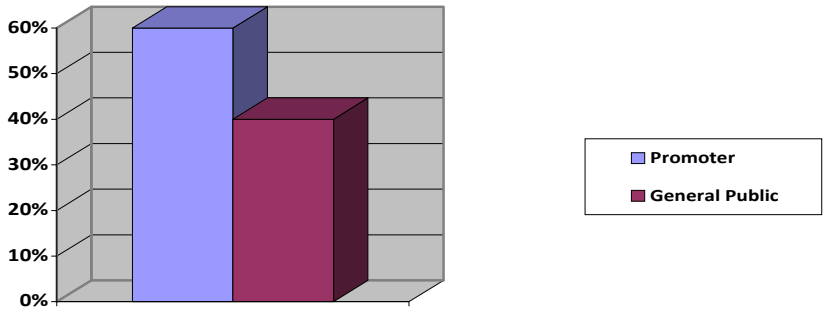
Promoter	62.04%
General public	37.96%
No. of General Shareholder	Around 4300



2) Introduction of National Finance Ltd.

National finance Ltd was established on August30, 1992.However the operation was commenced on May 10, 1993 and the present focus of the company in the area of hire purchase loan, housing loan etc.It is one of the leading finance company in Nepal, It is located in Pako, and Newroad.The shareholder pattern is

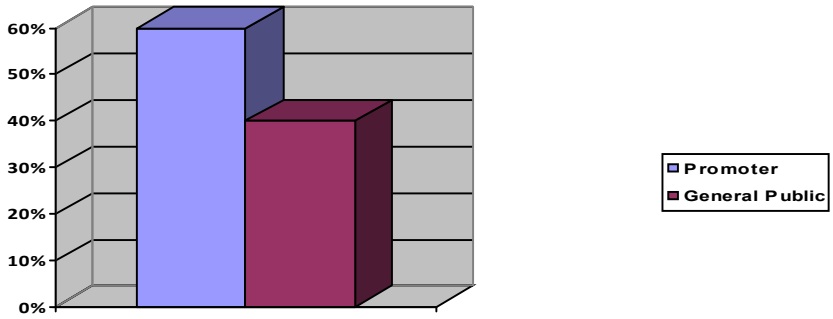
Promoter	60%
General Public	40%
No. of General Shareholder	Around1500



3) Introduction of Kathmandu finance ltd.

Kathmandu finance ltd. is a recognized financial institution in Nepal established in 2051B.S it has been providing services such as hire purchase, housing loan, education loan, loan against share certificates etc.It has been able to play dividend in different fiscal years. It is located in Putalisadak .The shareholding pattern is

Promoter	60%
General Public	40%
No. of general shareholder	Around 2400



4) Introduction of Goodwill Finance Co.

Goodwill finance is established under the finance company act 2042 in 2051B.S and it has started its operation from jest 2, 2052.Goodwill finance and investment co. was converted into Goodwill Finance Co.Ltd. In its seventh AGM. The main objective of goodwill finance is to uplift the economic status of Nepal by investing in different economic sector under economic liberalization policy and collecting saving from country under Finance company Act2040.It is located at Dillibazar

2.4 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.

2.4.1 Cash Dividends

Generally Business Corporation is paying the dividend in the form of cash and cash dividends are paid from the portion of earning to the investors in proportion to 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. Regular cash dividend are usually paid quarterly but a few companies declare them monthly annually, or semi 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, P-20).

Paying a dividend reduces 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.

2.4.2 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, P- 324). A 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 percent 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, P- 14).

Split takes place in two ways

a. Straight Stock Split

In the straight split company increase numbers of shares through a proportional reduction in the par value of stock. It increases the number of shares but decrease 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. (Bhattarai, 2006, P-383).

b. Reverse Stock Split

In the reverse stock split, company reduces number of 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 a conclusion, with a stock dividend the par value is not reduced whereas with a 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 occasions where a company wishes to achieve a substantial reduction in the market price per share. (Van Horne, 2006, P-325)

2.4.3 The effect of stock dividend or a stock split can summarize as follows

1. The issue of the stock dividend increases the number of the outstanding shares.
2. There is no change in the firm's assets or liabilities or in shareholders' equity.
3. The issue of the stock dividend does not affect the stock holder's proportional ownership.
4. 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, P- 448)The effect of stock dividend or stock split can be summarized below (Van Horne, 2006, P- 326)

2.4.4 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 $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 then will have 110 shares and total cash dividend will be $110 rather then $100, as before. In this case, a stock dividend increases the total cash dividend.

2.5 More Popular Trading Range

A stock split and 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 split and dividends is widely supported.

2.6 Informational or Signaling Effect

The declaration of stock dividend or a stock split may convey information about future earnings to investor. There may be asymmetric information between management and investors. As with capital structure and cash- dividend changes, a stock dividend or split may connote more convincingly management's belief about the favorable prospects of the

company. In this sense, the stock dividend or split is an attention getting device (Van Horne, 2006, P-327).

2.7 Share Repurchase

Corporate share repurchase is often viewed as an alternative to paying dividends. Especially stock is repurchased when the firm has abnormally high profits and is not in a position to effectively utilize surplus. Under this plan, company distributes cash to the shareholders buying back some of its own outstanding stock, thereby decreasing the number of shares which would increase earnings per share (EPS) and stock price. By repurchasing stock, the remaining stock holders receive future benefits instead of current high dividend (Adhikari, 1999, P-15).“If a company/ firm have excess cash and insufficient profitable investment opportunities to justify the use of these funds, it is in the share holder’s interest to distribute the funds. The distributions can be accomplished either by the repurchase are of stock or by paying the funds out in increased dividends.” (Van Horne, 2006, P-321)

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

However, Nepalese company act 1997 section 47 had prohibited company for repurchasing its own shares but now recently Nepalese act has allowed company for repurchasing its own shares.

2.8 Dividend Policies

A company should endeavor 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 polices established by different companies are as follows.

2.8.1 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, P-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 iNFCuence 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, P-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 a relatively stable dividend policy. This policy is completely rational policy and poses the strategic financial management. Therefore it is related to the company’s ability to pay dividends.

2.8.2 Stable Dividend at lower level than the present level

Sometime 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 a 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.

2.8.3. 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 favorably 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.

2.8.4 Residual Theory of Dividends

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, P-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 closer look at the relationship between dividends and value". (Adhikari, 1999, P18)

2.9 Factors Affecting Corporate Dividend Policy

Every corporate/ business organization always tends to set a corporate dividend policy efficiently and effectively for behalf of the corporate and shareholders/ investors 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/ setting the corporate dividend policy. Since following factors are to be considered.

a. Earning Stability:

A company with stable earrings 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 earning fall off in the future.

b. Investment Opportunities

The available profitable investment opportunities of firm affect 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 re-invested in short-term securities fielding nominal return or remain ideal. 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.

c. Liquidity of Firm

The liquidity position of the firm also affect to 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 greater 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 jeopardize this position in order to pay a large dividend or engage in a substantial share buyback.

d. Growth Prospects

A rapidly growing firm usually has a substantial need funds to finance the abundance of attractive investments 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.

e. Ability to Borrow of the Company

A liquid position is not the only way to provide for flexibility and there by protect 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 willing ness 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 a cash dividend.

f. Assessment of any Valuation Information

To the extent that there are insights into the effect 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.

g. Control

If a company pays substantial dividend, or 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 do 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.

h. Restriction in Bond Indenture of Loan Agreement

The protective covenants in a bond indenture or loan agreement often include a restriction or 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 iNFCuences dividends and share repurchase.

i. 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) cannot 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.

2.1 B. Review of Related Studies

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

WALTER STUDY

Professor James E Walter (1996) develop an approach on dividend policy by arguing that the choice of dividend policy affects the value of an enterprise .Upon his model he emphasized that dividend policy can affect the value of share. He has supported that this model is relevant .He too said that the investment policy of a firm couldn't be separated from its dividend

policy because both are interrelated. Which is opposite to Modigliani and miller approach.

Walter models clearly show the importance of the relationship between the return on firm's investment and internal rate of return, and cost of capital. The required rate of return (K) is determining by the dividend policy. So far the internal rate of return is greater than the cast of capital, stock price will be enhanced by retention and vary inversely with dividend payout.

This model is based on the following assumption:

- The firm finances all its investment through retained i.e. it does not require to issue debt or new equity.
- Cost of capital and internal rate of return of a firm is constant.
- Whole earnings are either distributed or reinvestment internally.
- No change in value of EPS and DPS.
- The firm has a perpetual and infinite life.

Based on above assumption, Market Price per Share (MPS) is calculated as follows:

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

Or,

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

Where,

P = Market Price per Share

Div = Dividend per Share

EPS = Earnings per Share

R = Internal Rate of return

K = Cost of capital

Walter's view in the optimum dividend pay our ratio can be summarized as follows:

Growth firm: (r>k)

Firms having r>k is called growth firm. For such a firms the relationship between dividends and stock price is negative I.e. due to more dividends, stock price normally decreases. So it is better to retain earnings for such firms. The optimum payout ratio under this firm is 0%.

Normal Firms :(r=k)

Firms having r=k is called Normal firm. Under this type of firms, the dividend policy has no effect on the Market Value per Share. There is no significant affect in the value of share if the firm made to decide for retaining the earnings or distributed the dividends.

Declining firms :(r<k)

Less internal rate than cost of capital is called declining firm. This kind of firm does not have profitable opportunities. So it would be better to distribute the earning to the shareholders that they can invest their return to outside market for profit. The MVPS will increase if the payout ratio is increase.

GORDONS STUDY

Gordon's 1962 develops model relating to the market value of the firms and dividend policy. Under his study, he concluded that there is a direct relationship between dividend policy of a firms and its market value. He assumes that dividend per share determines the value of shares. According to him, dividend policy of a firm will affect to the value return to the investments is equal to the capitalization(r=k).His arguments suggest that the investor prefer dividend than future capital gain .this argument insisted that an increase in dividend payout ratio leads to increase in the stock's price because investor consider the divined yield less risky than they expect capital gain.

Gordon model is based on the following assumptions:-

* The firm is an all equity firms.
*Retain earnings is only the source of new investments.
*The internal rate of return and cost of capital remain constant.
*No tax on corporate income.

The retention ratio's' once decides upon on is constant and thus the growth rate.

g=br is constant forever.

The discount rate must be greater than 'g' to get meaningful value. Based on the above assumption, Gordon has provided formula to deterring the market of share. This is symbolically expressed as,

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

Where,

P=Price of share

EPS=Earning per share

b =retention ratio

(1-b)=dividend payout ratio

K=cost of capital or capitalization rate.Br Growth rate.

Growth Firm(r>k): Under the growth price trends to decline with increase in payout ratio or decrease in retention ratio. High dividend leads to decrease in share price. For Such a firms the dividend and stock price have negative relationship.

Normal Firm(r=k): share price remains constant regardless of changing in dividend policy.

Decling Firm(r<k): share price will rise if the dividend payout ratio is rise. That means dividend and share price are positively correlated in a decling firm.

Modigliani & Miller's Study

Modigliani and millers 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 assumption.

1. 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.
2. An absence of flotation costs on securities issued by the firm.
3. A world of no taxes.
4. A given investment policy for the firm, not subject to change.
5. Perfect certainly by every investors as to 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 value/ price of share. Their market price of a 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 the end of the period.

Thus, $P_o = \frac{D_1 + P_1}{1 + Ke}$ (I)

Where,

P_o= Market price at the beginning at the zero period.

K_e = Cost of equity capital (assume constant)

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

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

No External Financing

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

$$np_o = \frac{n(D_1 + P_1)}{1 + Ke} \qquad \text{(II)}$$

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 shares at the price of P_1.

$$np_o = \frac{nd_1 + P_1(n+m) - mP_1}{1 + Ke} \qquad \text{(III)}$$

Where,

n = No of shares at the beginning

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

Total numbers of shares

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

$$mp_1 = I - (E - nD_1) \qquad \text{(IV)}$$

Where,

mp_1 = 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.
nD_1	=	Total dividend paid
$E - nD_1$	=	Retained earning

Conclusion

By substituting the value of mp1 from equation (IV) to the equation (iii), we find,

$$nP_o = \frac{nd_1 + P_1(m+n) - I + E - nD_1}{1+ke}$$

$$= \frac{P_1(m+n) - I + E}{1+ke}$$

In such a way, MM approach concludes its result that there is no any role of dividend (D1) 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, P-311).

VAN HORNE AND MCDONALS STYUDY:

Van home and Mc Donald‘s (1971) conducted a comprehensive study on dividend policy and new equity financing with the purpose of

investigating the combined effect of dividend policy and new equity financing decision on the market value of the firm's common stock. Selecting on two industries they did the investigation and used a cross section regression model during the year end 1968 performed the empirical test. The required data were collected from 86 electric utility firm's included on the COMPUSTAT utility database and 39 firms in the electric component industries as listed on the COMPUSTAT industrial data tape.

They concluded on their study that electric utility firms in 1968, share value was not adversely affected by new equity financing in the presence of cash dividends, except for these in the highest new issuing group and it made new equity a more costly form of financing than the retention of earning. They also indicated that the payment of dividend through excessive equity financing reduces share price. However, a significant relationship between new equity financing and its value was not demonstrated for electronics, electronic components Industry.The model tested by them is as follows:

First model was:

$$Po/Eo=ao+a1\ (g)+a2\ (Do/Eo)+a3\ (lev)+u$$

Where,

Po/Eo=closing market price in 1968 divided by average EPS for 1967 and 1968.

g =Expected growth rate measured by the compound annual rate if growth in assets per share for 1960 through 1968.

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

Lev=Financial risk, measured by interest charges divided by the difference of operating revenues and operating expenses.

U=Error term.

Second Model was:

Po/Eo=ao+a1(g)+a2(Do/Eo)+a3(lev)+A4(Fa)+a5(Fb)+a6(Fc)+a7(Fd)+u

Where,

Fa, Fb, Fc and Fd are dummy variables corresponding to “new issue ratio” (NIR) groups A through D.

It is noted that they had grouped the firms in five categories A, B, C, D and E by NIR for each year the value of dummy variables represting equation its NIR is group is one and the value of remaining dummy variable is zero.

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

Po/Eo=ao+a1(g)+a2(Do/Eo)+a3(Lev)+A4(Or) +u

Where,

(Lev)=Financial risk measures by long term debt plus preferred stock dividend by net worth as of the end of 1968.

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 (pt) or its ratio to dividend (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)

G. William Schwert's Study

He analyzed the relation of stock volatility over the time. In his argument, he claimed that not only the dividend policy factor cause in fluctuating 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 macroeconomic 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 percent per month during the 1857-1987 period, large changes in the extant volatility of market returns have important negative effect on risk- averse 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 expose variability of dividends.

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

$E_{t-1}P_t = E_{t-1} \sum_{k=1}^{\infty} \frac{Dt + K}{(1 + R_{t+K})^K}$ ..... (I)

Pt = 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 concluded that the changes in stock market occur 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 (i) the conditional variance of security prices is proportional to the conditional variance of the expected future cash flows. (Schwert, Dec, 1989, P- 1115)

Nishat's and Irfan's study

They have conducted a study based on cross-sectional regression analysis of the relationship between stock price volatility and dividend policy after controlling for firm size, earning volatility, leverage and assets growth. A sample of 160 listed companies in Karachi stock exchange is examined for a period of from 1981 to 2000. They used the variables like dividend yield, earning volatility, payout ratio, size long term dent, growth in assets.

Both dividend policy measures (dividend yield and payout ratio) have significant impact on the share price volatility.

They suggest that dividend policy affects stock price volatility and it provides evidence supporting the arbitrage realization effect, duration effect and information effect in Pakistan. In overall period the size and leverage have significant and positive impact on stock price volatility. The size effect is negative during pre-reform period (1981-1990) but positive during reform period. The earning volatility impact is negative and significant only during reform period. According to duration effect and arbitrage effect, the

dividend yield and not the payout ratio is the relevant measure. The rate of return effect implies that both dividend yield and payout ratio matters. Dividend policy may serve as a proxy for growth and investment opportunities. Both the duration effect and the rate of return effect assume differentials in the timing of the underlying cash flow of the business. If the relationship between risk and dividend policy remains after controlling for growth, this would suggest evidence of either the arbitrage or information effect.

The analysis utilized cross sectional generalized least squares regression. The most basic test involved regressions the dependent variables, price volatility (P.V.) against the two independent variables i.e. dividend yield and payout ratio. This provided a crude test of the relationship between common stock volatility and dividend policy. The following regression was adopted. In an attempt to limit this problem, regression was modified to include the control variables as shown below.

$$PV_j = a_1 + a_2 DY_j + a_3 POR_j + e_j \quad (I)$$

$$PV_j = a_1 + a_2 DY_j + a_3 PORj + a_4 SZj, + a_5 EVj + a_6 DAj + e_j \quad (II)$$

Where,

PV = Price volatility

POR = payout ratio

DY = dividend yield

SZ = size

DA = leverage

EV = earning volatility

The expectation was that the DY, POR and SZ variables would be negatively related to PV whereas EV and DA would be positively related to PV. That is, increase in dividend yield, payout ratio and size of the firm will be associated with a decrease in the volatility of the firm's stock price. By contrast, firms with relatively higher earnings volatility or higher leverage will tend to display higher price volatility.It concluded that dividend policy affects stock price volatility and it provides evidence supporting the arbitrage realization effect, duration effect and information effect in Pakistan where as payout ratio measure is having significant impact only at lower level of significance. In overall period the size and leverage have positive and significant impact on stock price volatility. Although the results are not robust enough as in the case of developed markets but are consistent with the behavior of emerging markets. (Nishat, and Irfan, 2004, P-1).

Linters Study

Linter in his study conducted in context of U.S.A., found that firms generally think in terms of proportions of earnings to be paid out. Investment requirements are not considered for modifying the pattern of dividend behavior. Thus firms generally have target payout ratios in view while determining change in dividend per share. Lets us assume that a firm has EPS as the expected earning per share in the currentyear and p as the payout ratio .if the strictly follows stable payout policy expected per share,DIV1,is:

$$DIV_1=pEPS_1$$

and dividend change (as compared to the dividend per share of the previous year DIV0 will be :

$$DIV1-DIVo=pEPS1-DIVo$$

But in practice firm do not change the DPS (or dividend rate) immediately with change in the earning per share. Shareholders like a steadily growing DPS. Thus firms change their dividend slowly and gradually even when there are large increases in earnings. This implies the speed with which they attempt to move towards the full adjustment of payout to earnings .Linter has therefore suggested the following to the following to explain the change in dividend of firms in practice:

DIV_1-DIVo=b(pEPS_1-DIVo)

Where b is the speed of adjustment .A conservation company will move slowly towards its target payout.The implication of eq^n 5and a the firms establish their dividends in accidence with the level of current earnings,b that the change in dividends new time do not correspond exactly with change in earnings in the time period.In other words ,the dividend per share depends on the current earnings (EPS1) as well as the dividend per share depends on that that year's earning per share and the dividend per share in the year before linter models model can be express in the form of the following regression.

DIVt-DIVt-$_1$=a+b(pEPSt-DIVt-1)+et

DIVt=a+bDIVt*+(1-b)DIVt-1+et

Where DIVt is the DPS in year t1 b is the adjustment factor, DIVt=pEPSt is desired DPS;Pis the target payout ratio;

DEVt-1is dividend t-1and e is the error term.

We can interpret the term (1-b) as a safety factor the management observes by not increasing the dividend payment to the levels where it can't be mainted. Together a and b coefficients can be used to test the hypothesis

that management is more likely to increase dividend over time rather than cut them.

2.1 C: REVIEW OF ARTICLES IN NEPALESE PERSPECTIVE:

Few studies have been conducted in dividend behavior in Nepal, which is reviewed as follows;

Shrestha's study:

Dr. M.K Shrestha (1992) has written the book on the topics of "shareholders democracy and annual general meeting feedback' which deals with the policies and financial performance of some financial companies in Nepal. Dr Shrestha (1992) presents his paper on the occasion of the fifth annual general meeting of Nepal Arab bank Ltd. On his paper, he opines that shareholder has common views on the problem and constraints of the shareholders, which are as follows:

The cost –push fractionation at exorbitant rate has made the shareholders to expect higher from their investment.

Multiple decrease in the purchasing power of the Nepalese currency to the extent that higher return by way of dividend is just a natural economic consequence of it.

Erosion in the purchasing power of the income has made it clear that dividend payment must be directed to enhance shareholder's purchasing power by raising dividend payout ratio on the basis of both earnings cost theory.Indo-Nepal trade and transit deadlock has become a sort of economic

welfare-putting rise in the cost of living index to a considerable extent. This is one of the reasons, which made shareholder's to expect higher demand for satisfactory dividend.The waiting of five years with peanut dividend in previous year is equally a strong enforceable reason of the bank's shareholders to expect handsome dividend already assured and committed in various reports of the earlier annual general meeting.One way to encourage risk talking ability and preference is to have proper risk return trade off by bank's management board in a way that higher return must be the investment rule for higher risk takers that comprise bank's shareholders. On behalf of these difficulties, He requested to the bank management board to rethink the matters relation to payment of dividend. Through, at the end of his paper Dr Shrestha opines that the bank is trying its best to satisfy both the shareholders and employees. On the third general meeting of the then Nepal grind lays bank is a report submitted by Dr shrestha has shown that the share holder's thought on bonus payment and share holder 's dividend payment are not found to properly balanced . the bonus of rs 2.85 million was paid to nearly 50 employees, whereas the dividend rs 3.00 million was paid to more than 5000 share holders, which is mance less socially justified from income sharing prospective. the share holder s are satisfied and happy with the excellent financial performance of the bank but the Management decision on distribute 10% dividend and then arguing interim dividend of7.5% to show that shareholders are getting 17.5% dividend doesn't match the expectation of share holders.

Review of thesis

Some researcher has been conducted by students of MBA on the financial aspect of finance company related to dividend policy .which is supposed to relevant for this study. Therefore they have been presented here.

Bhattarai (1990) on his research topic "share market in Nepal" Mr. A. R Bhattarai. (1990) has conducted the research in 1990 .In where he did study on dividend policy and made a conclusion, that is given below. Though his main area was in stock price. Most of the companies have found that they were paying less DPS than the expected of investors. Some of them were paying higher than the average cash DPS and other were paying regular dividend with higher amount was low price. Taking the whole company, Most were under rating than the expectation of investors thereby the low marketability of shares on the trading floor of stock exchange.

In order to improve the dividend policy. Bhattarai (1992) suggested that the companies should pay proper attention to meet investor's expectation for which the following policies can be followed:Listed companies should follow the minimum payment dividend policy.ie. They should be bound to a certain minimum amount of dividend every year to the investors.

The listed companies should pay regular dividend or should bound to pay fixed rate of dividend every year for which they should compel to maintain a regular cash balance declaring dividend to the stock price.The companies should pay extra dividends as an interim dividend with regular dividend when the company makes good earnings times.

Adhikari (1999): Adhakari has conducted a study on corporate dividend practices in Nepal; 1999.The specific objectives of his study are as follows: to analyze the properties of the portfolio formed on dividends,To examine the relationship between dividends and stock prices. to survey the opinions of financial executives on corporate dividend practices.Upon his conclusion, there are differences in financial position of high dividend paying and low dividend paying companies. Other things remain same, financial position of high dividend companies is comparatively better than that of low dividend paying companies. Another interest conclusion of his study is that market price of share affected by dividend. Finally, financial executives of Nepal reject dividend as a residual decision in Nepalese companies.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology describes the methods and process applied in the entire aspects of study. Every research should be outline in the systematic manner and for that reason. Research methodology is one of 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 is to explain, test and analysis of dividend policy and stock price volatility i.e. its impact on market price of stock. Therefore, some systematic research methodologies have been used. This study is based on secondary data but also some relevant questions would be asked to the concerning bodies for the purpose of practical study.

3.2 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 the dividend policy of the samples firms. The analysis is basically based on the secondary data, financial statements of five years from 060/61 to 064/65 taken for finance companies.

3.3 Population and Sample

There are thirty three (33) listed finance companies till data on 16th June 2010 spreading their shares in the stock market. So it is not easy to study all of them. Therefore four finance companies are taken as sample among the 33 listed companies. The selected listed finance companies are as follow

1. Nepal Aawas Bikas Bitta Co.(NABB)
2. National Finance Co Ltd.(NFC)
3. Kathmandu Finance Ltd.(KFL)
4. Goodwill finance(GFCL)

3.4 Sources of Data Collection

All the analysis will be based on secondary data. In this analysis, data are collected from different sources i.e. Nepal stock exchange, different websites like www.nepalstock.com, and www.google.com, and annual reports of the concerned banks, business journals, newspapers. For the purpose of analysis of data five (5) years well be taken as sample years from 060/61 to 064/65. Financial and statistical tools are used to analysis the data which are as follows:

3.5 Data Analysis Tools

3.5.1 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.

(I) Earning Per Share (EPS)

EPS is calculated to know the 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.

$$EPS = \frac{Net\ profit\ After\ Tax}{No.of\ common\ stock\ outsanding}$$

(II) Dividend Per Share (DPS)

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

$$DPS = \frac{Total\ Dividend}{No.of\ common\ stock\ outsanding}$$

(III) Dividend Payout Ratio (D/P ratio)

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

$$D/P = \frac{Dividend\ per\ share\ (DPS)}{Earning\ per\ share\ (EPS)}$$

(IV) Market Price Per Share (MPS)

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

3.5.2 Statistical Tools

(I) Arithmetic Mean

Arithmetic mean of a given set of observation is their sum dividend by the number of observation. In general X_1, X_2..... X_n are the given "n" observation, and then their arithmetic mean is usually denoted by $\overline{X}$ is given by:

$$\overline{X} = \frac{X_1 + X_2 + ...Xn}{n}$$

or $$\overline{X} = \frac{\sum x}{n}$$

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

(II) The Coefficient of Variation (CV)

The coefficient of variation is the relative measure of dispersion, which is defined as the ratios of the standard deviation to the mean expressed in percent. (.Levin. and Rubin, 1994, P-114).

In symbol:

$$CV = \frac{S.D}{X} X100$$

Where,

S.D = standard deviation

$\overline{X}$ = mean average

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

(III) Standard Deviation (S.D)

The measurement of the scatterness 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.

In symbol:

$$S.D = \sqrt{\frac{\Sigma(X-\bar{X})^2}{n-1}}$$

(IV) Coefficient of Correlation

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 Rabin, 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 stock prices and dividends, stock prices and retained earnings, DPS and EPS.

(V) 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 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.

$$R^2_{1.23} = \frac{a\sum X_1 + b_1 \sum X_1 X_2 + b_2 \sum X_1 X_3 - n(\bar{X}_1)^2}{\sum X_1^2 - n(\bar{X}_1)^2}$$

(VI) Regression Equation

Regression is the statistical tool which is used to determine the statistical relationship between two (or more) variables and to make estimation (or predication) of one variables on the basic of the other variables. In the other words, regression is that statistical tools with the help of which the unknown value of one variable. There are two types of regression analsis.one is called simple linear regression analysis which is concerned with the study of the relationship between one variable called depend or explained variable and other variable called multiple-linear regression analysis, which is concerned with the study of the relationship between more than one variable.

1) Simple regression equation: $y=a+bx$
2) Multiple regression equation:$x_1=a+b_1x_1+b_2 x_2$
3) The regression analysis submits the following two concepts.

A) Regression constant (a)

The value of the constant which is the intercept of the model indicates the average level of dependent variables when independent variables is 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.

$$a = \frac{\sum Y}{n} - \left(\frac{\sum x}{n} \times b\right)$$

B) Regression Coefficient (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 variable in the regression model. In other words, the coefficient describes how change independent variables effect the values of dependent variables estimate.

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

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

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 and some recommendation.

4.1 Analysis of Financial Indicators and Variables

4.1.1 Analysis of EPS

Earnings per share (EPS) are one of the most important financial indicators, which measure 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 the following table shows the EPS of the0 sample firms.

Table 4.1

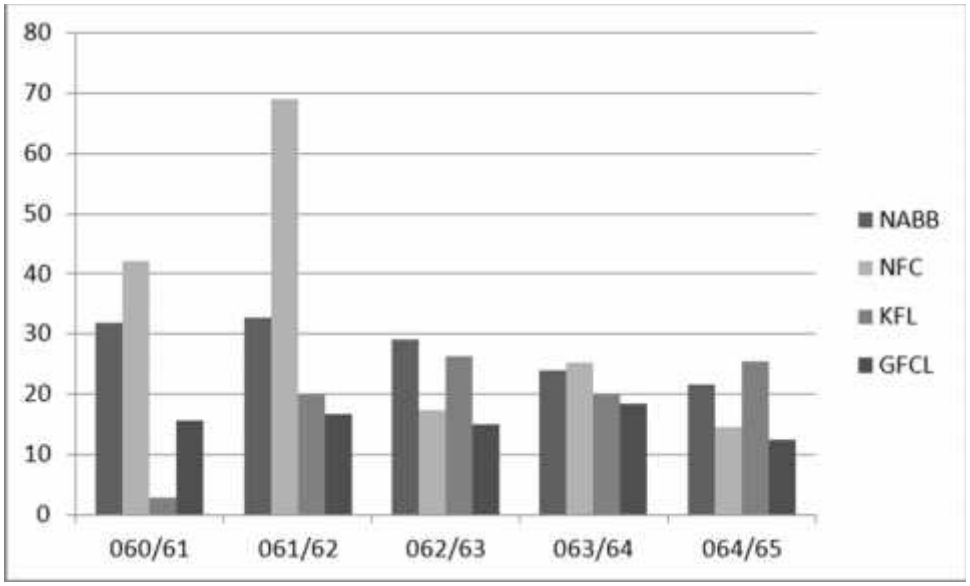
Analysis of EPS:

Years	NABB	NFC	KFL	GFCL
060/61	31.82	42.15	2.77	15.65
061/62	32.67	69.12	19.97	16.72
062/63	29.09	17.37	26.3	14.98
063/64	23.92	25.36	20.04	18.45
064/65	21.54	14.62	25.57	12.48
Total	139.04	168.62	94.65	78.28
Mean $(\overline{X})$	27.81	33.72	18.93	15.66
S.D.	4.89	22.51	9.51	2.21
CV.	17.58	66.75	50.24	14.11

Source: ANNEX

Figure 4.1

Analysis of EPS:



The above mentioned comparative table shows that EPS of the all companies are fluctuating trend throughout the study period. The maximum EPS of NABB, NFC, KFL and GFCL are 32.67, 69.12, 62.30 and 18.45 respectively. On the other hand, minimum EPS of NABB, NFC, KFL and GFCL are 21.54, 14.62, 2.77 and 12.48 respectively.

Thus, the analysis of EPS trend shows that average EPS in NFC is greater than other companies. It indicates that the NFC's profitability of common shareholders' investment is better than others companies. The highest S.D. in EPS of NFC shows that greater amount of dispersion in observation (variables) whereas lowest S.D. in GFCL indicates that high degree of uniformity of the observation (variable) as well as homogeneity of a series. Being a higher CV in EPS of NFC indicates that higher variability of variables whereas having a smaller CV in EPS of GFCL shows that less variation in variables.

4.1.2 Analysis of DPS

Dividend per share (DPS) is that amount which is paid to common shareholders on a per share basis. DPS shows that what exactly do 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 firms.

Table 4.2

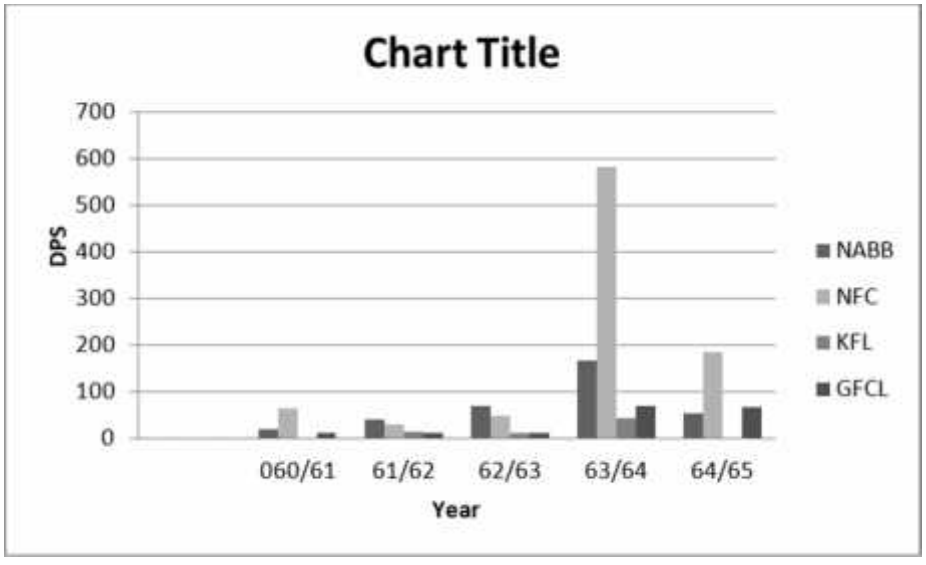
Analysis of DPS:

Year	NABB	NFC	KFL	GFCL
060/61	18	63.15	0	10.53
61/62	41.04	28.22	14.53	10.53
62/63	68.54	48.97	10	10.53
63/64	165.78	582.5	43.54	69.09
64/65	52.62	184	0	65.81
Total	345.98	906.84	68.07	166
Mean $(\overline{X})$	69.2	181	13.60	33.3
S.D.	57.05	232.31	17.89	31.20
CV.	82.44	128.06	131.54	93.69

Source: ANNEX

Figure 4.2

Analysis of DPS:



The above mentioned table shows that dividend per share of all the sample firms are in fluctuating trend. Except KFL all other finance companies have paid regular dividend. In fiscal year 060/61 to062/63 GFCL has paid constant dividend. The above table shows that mean DPS of NFC is greater than the other companies that its profitability of common shareholders investment is better than other companies which create the positive attitude of the shareholders toward the finance companies.

Thus, the analysis of the DPS trend shows that smaller standard deviation in DPS of KFL mean high degree of uniformity of the DPS paid by the KFL whereas large standard deviation in DPS of NFC result in large dispersion in DPS paid by the NFC. Lower CV in DPS of NABB indicates that there is less variation in DPS where as higher CV in DPS of GFCL shows that there is a higher variability of variable i.e. DPS.

4.1.3 Analysis of MPS of Sample Firms

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

Table 4.3

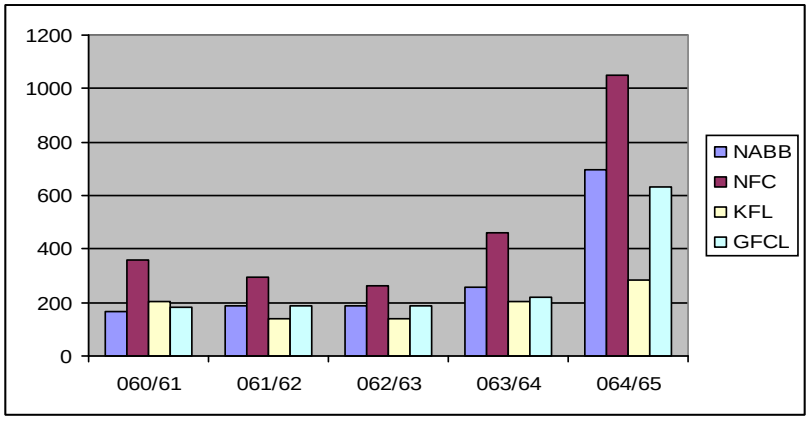
Analysis of MPS

Year	NABB	NFC	KFL	GFCL
060/61	165	360	205	180
061/62	185	295	138	185
062/63	190	263	140	185
063/64	257	460	203	220
064/65	699	1050	285	633
Total	1496	2428	971	1403
Mean $(\overline{X})$	299.20	485.60	194.2	280.60
S.D.	226.16	324.36	60.28	197.65
CV.	75.59	66.79	31.04	70.38

Source: ANNEX

Figure 4.3

Analysis of MPS:



Above table shows that highest average MPS in NFC indicates the highest profitability to shareholders because it has the greater amount in MPS in respective year than the other companies. According to the above table the smaller amount in S.D. of MPS of KFL indicates that there is more consistency in variable whereas the higher amount of MPS in S.D. of NFC means, there is not homogeneity in observation.

Similarly, having lowest in CV of MPS in KFL will be smaller fluctuation or variation in MPS whereas the having the highest amount in CV of MPS in NABB will be greater variation in MPS.

4.1.4 Analysis of Dividend Payout 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). The following table shows that dividend payout ratio of sample finance companies.

Table4.4

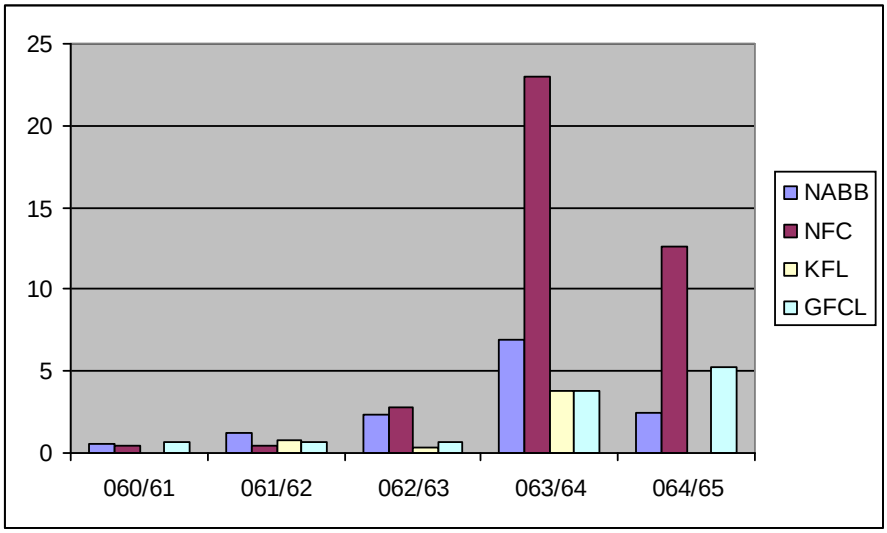
Analysis of Dividend payout ratio

Years	NABB	NFC	KFL	GFCL
060/61	0.566	0.498	0	0.67
061/62	1.26	0.408	0.727	0.63
062/63	2.36	2.82	0.380	0.703
063/64	6.93	22.97	3.74	3.74
064/65	2.44	12.58	0	5.27
Total	13.56	38.28	3.28	11.01
Mean $(\overline{X})$	2.71	7.86	0.66	2.20
S.D	2.48	9.82	0.90	2.17
CV.	91.51	124.94	136.36	98.64

Source: ANNEX

Figure4.4

Analysis of Dividend payout ratio



According to above table, smaller amount in SD of D/P ratio of KFL indicates that there is more consistency in D/P ratio where as the highest amount in SD of D/P ratio in NFC shows that there is not homogeneity in D/P ratio. Similarly, the highest

CV in KFL indicates that there is more variation in D/P ratio where as lowest CV in NABB represents that there is not greater fluctuation in D/P ratio.

4.1.5 Analysis of Dividend Yield 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). The following table shows that dividend payout ratio of sample finance companies.

Table 4.5

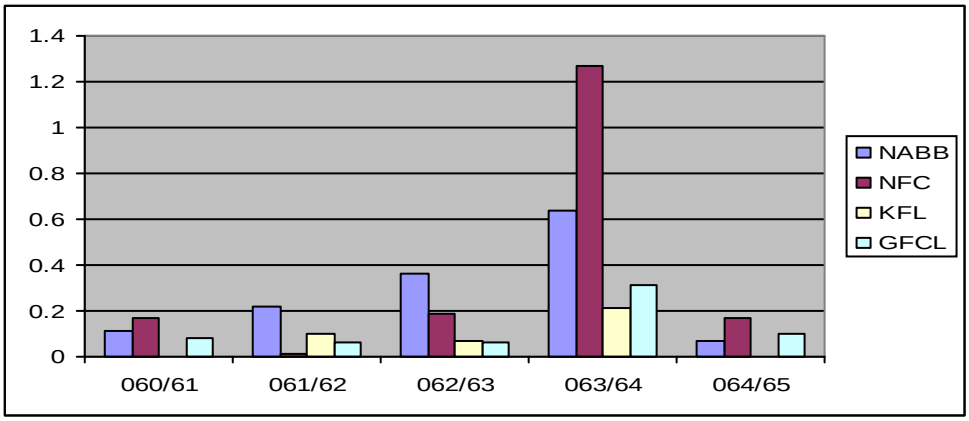
Analysis of Dividend Yield ratio

Years	NABB	NFC	KFL	GFCL
060/61	0.11	0.17	0	0.08
061/62	0.22	0.01	0.10	0.06
062/63	0.36	0.19	0.07	0.06
063/64	0.64	1.27	0.21	0.31
064/65	0.07	0.17	0	0.10
Total	1.40	1.81	0.38	0.59
Mean $(\overline{X})$	0.28	0.36	0.08	0.12
S.D	0.23	0.51	0.090	0.012
CV.	82.14	141.67	112.5	91.67

Source: ANNEX

Figure 4.5

Analysis of Dividend Yield ratio



According to above table, smaller amount in SD of Dividend yield ratio of KFL indicates that there is more consistency in Dividend yield ratio where as the highest amount in SD of Dividend yield ratio in NFC shows that there is not homogeneity in Dividend yield ratio. Similarly, the highest CV in NFC indicates that there is more variation in

Dividend yield ratio where as lowest CV in NABB represents that there is not greater fluctuation in Dividend yield ratio.

4.2 Simple Regression Analysis

This part is related to the analysis of the relationship between market price of stock (MPS) and dividend per share (DPS), market price of stock (MPS) and earnings per share (EPS) and cash dividend per share (DPS) and earnings per share (EPS) of sample firms. The following table shows the simple regression results of sample firms with the relationship between MPS, DPS and EPS.

Table: 4.6

Simple Regression Analysis(Dps=a+bMps)

Companies	Sample size	Regression equation		S_b	R	R^2
		A	B			
NABB	4	303.11	-0.042	2.34	-0.0105	0.00011
NFC	4	431.20	0.30	0.0017	0.215	0.046
KFL	4	204.55	-0.76	0.612	-0.23	0.053
GFCL	4	144.10	4.10	2.79	0.42	0.42

The above table depicts the major output of simple regression analysis between DPS and MPS of all four finance companies. Regression coefficient (R) of NABB (-0.0105) and KFL (-0.23) are negative. But in case of NFC and GFCL are positive. ie. (0.215and 0.42) The constant (a) of NABB, NFC, KFL and GFCL are 303.11, 431.20, 204.55 and 144.10 respectively. The beta coefficient(b)of NABB and KFL are negative respectively which indicate that one rupee increase in dividend per share leads to decrease 0.042 and 0.76 in stock price. Similarly NFC has 0.30 and GFCL has 4.10 of regression coefficient. Which indicate that one rupee increase in dividend per share leads to increase of 0.30 and 4.10 in stock price. The value of coefficient of determants (R^2) is 0.00011, 0.046, 0.053 and 0.42 respectively. Accordingly to the respect finance companies, among them KFL has relatively high. It indicates that variation in the independent variables MPS explain 5.3% of the dependent variables DPS.

Table4.8

Simple Regression Analysis (Dps=a+bEps)

Companies	Sample size	Regression equation		S_b	R	R^2
		A	B			
NABB	4	31.06	-0.047	0.0414	-0.55	0.3025
NFC	4	42.067	-0.046	0.085	-0.481	0.231
KFL	4	17.433	0.11	0.30	0.20	0.04
GFCL	4	15.763	-0.0031	0.040	-0.043	0.00185

The above table depicts the major output of simple regression analysis between DPS and EPS of all four finance companies. Regression coefficient (R) of NABB (-0.55), NFC (-0.481) and GFCL (-0.043) are negative. But in case of KFL are positive. The constant (a) of NABB, NFC, KFL and GFCL are 31.06, 42.067, 17.433 and 15.763 respectively. The beta coefficient (b)of NABB,NFC and GFCL are negative respectively which indicate that one rupee increase in Earnings per share leads to decrease (-0.047),(-0.046) and(-0.0031) in dividend per share .Similarly KFL has positive beta coefficient Which indicate that one rupee increase in earnings per share leads to increase of 0.11 in dividend per share. The value of coefficient of determents(R) is 0.3025, 0.231, 0.040 and 0.00185 respectively. Accordingly to the respect finance companies, among them NABB has relatively high. It indicates that variation in the independent variables EPS explain 30.25% of the dependent variables DPS.

4.3 Multiple Correlations between DPS, EPS and MPS

The study of the relationship among three or more variables at a time is called multiple correlations. In other word, in multiple correlations all the given variables are studied at one time by taking one variable as dependent and all the remaining variable as independent. The three variables we are considering in this report are DPS(X_1), EPS (X_2), and MPS (X_3)

- Multiple Correlation Coefficient of NABB

The coefficient of multiple correlations (i.e. multiple correlation coefficients) between the three variables X_1, X_2 and X_3 when X_1 is dependent variable and X_2 and X_3 are independent variables is denoted by $R_{1.23}$ which is calculated by following formula:

$(R_{1.23})^2$ =0.93 i.e. 93%

It shows that 93% of the total variation in the dependent variable DPS(X_1) has been explained by the two independent variables EPS (X_2) and MPS (X_3) and remaining is due to effect of other factors.

- Multiple Correlation Coefficient of NFC

The coefficient of multiple correlations (i.e. multiple correlation coefficients) between the three variables X_1, X_2 and X_3 when X_1 is dependent variable and and X_3 are independent variables is denoted by $R_{1.23}$ which is calculated by following formula:

$(R_{1.23})^2$ =0.89 =89%

It shows that 89% of the total variation in the dependent variable DPS(X_1) has been explained by the two independent variables EPS (X_2) and MPS (X_3) and remaining is due to effect of other factors.

- Multiple Correlation Coefficient of KFL

The coefficient of multiple correlations (i.e. multiple correlation coefficients) between the three variables X_1, X_2 and X_3 when X_1 is dependent variable and X_2 and X_3 are independent variables is denoted by $R_{1.23}$ which is calculated by following formula:

$(R_{1.23})^2 = 0.092 = 9.2\%$

It shows that 89% of the total variation in the dependent variable DPS(X_1) has been explained by the two independent variables EPS (X_2) and MPS (X_3) and remaining is due to effect of other factors.

- Multiple Correlation Coefficient of GFCL

The coefficient of multiple correlations (i.e. multiple correlation coefficients) between the three variables X_1, X_2 and X_3 when X_1 is dependent variable and X_2 and X_3 are independent variables is denoted by $R_{1.23}$ which is calculated by following formula:

$(R_{1.23})^2 = 0.896 = 89.6\%$

It shows that 89% of the total variation in the dependent variable DPS(X_1) has been explained by the two independent variables EPS (X_2) and MPS (X_3) and remaining is due to effect of other factors.

4.3 Multiple regression analysis

Multiple regression analysis consists of the measurement of the relationship between the dependent variable and two independent variables. The main objective of regression analysis is

i) To obtain the measure of the proportion of in the dependent variable this is explained by the independent variables.

ii) To obtain the measure of error involved in using the regression equation as a basic for estimation using this regression equation as a basic for estimation of the dependent variable.

The following table shows the multiple regression results of sample firms with the relationship between DPS, EPS and MPS

Table: 4.8

Regression statistic	No. of companies			
	NABB	NFC	KFL	GFCL
Multiple R	0.93	0.37	0.13	0.94
R square	0.87	0.13	0.017	0.89
Adjusted r square	0.75	-0.73	-0.97	0.78
Standard error	28	305	26.5	14.6

The above table depicts the major output of multiple regression analysis between one dependent variable(DPS) and two independent variable (EPS and MPS).GFCL has lesser standard deviation than other finance companies.The multiple regression of NABB is 0.93,NFC is 0.37, KFL is 0.13 and GFCL is 0.94.GFCL and NABB have little bit same regression.

4.4 Major Findings

A. Findings of Descriptive Analysis

1. From the descriptive analysis, there is not any consistency or uniformity in dividend policy in the sample finance companies. It has indicated the need of dividend strategy as well as the need of proper analysis of the respective sector of the finance companies.
2. Most of the Nepalese firm from the very past do not have profit planning and investment strategy which has imbalanced the whole position of the firms. It means that there is not consistency even in the earnings.
3. The MPS is affected by the financial position and the dividend paid by the firms, in this regards the MPS of the sample finance companies is to be fluctuated. It denotes Nepalese investors are not treated fairly.
4. The lack of financial knowledge and the market inefficiently has affected the market price of the share in all the firms.
5. The investment behavior of investor on the market has also been affecting to market price of the share.
6. The information conveyed by the finance companies is also affecting to the market price of the shares.
7. Rumor about the MPS among the investor is also affecting to the market price of share.
8. Due to investment behavior pattern of share broker that is market price of share.

B. Findings of Financial Indicator Analysis

1. Dividend per share of all the samples finance companies is in fluctuating trend. The average dividend per share paid by the NFC is greater than the other companies.
2. Earning per share of all the sample companies are in fluctuating trend where as EPS of NABB and NFC are in increasing trend Through year 060/61 to 062/63 that shows the betterment financial position of it.
3. The D/P ratio of NFC and NABB are greater than the other companies.
4. The MPS of all the sample finance companies are seen in fluctuating. The MPS of NFC is greater than the other companies. This is initially in increasing than other year.

C. Findings of Coefficient Correlation (R) and Coefficient of Determination (R^2) Analysis

1. The relationship between MPS and DPS of NABB shows the coefficient of determination (R^2) is 0.00011, which indicates that only 0.01% percent of the variation of MPS is determined the explanatory variable DPS. The simple correlation coefficient (R) between MPS and DPS of NABB is -0.0105.The simple correlation determinant(R^2) between DPS and MPS of NAAB is 0.00011.The multiple correlation coefficient between DPS,EPS and MPS of NABB is 93%

2. The relationship between DPS and MPS of NFC shows the coefficient of determination (R^2) is 0.046 which indicates that only the 4.6% percent variation in MPS is caused by the explanatory variable DPS. The simple correlation coefficient (R) between DPS and MPS of NFC is 0.215 and the multiple correlation coefficient between DPS,MPS and EPS OF NFC is 89%

3. The relationship between DPS and MPS of KFL shows the coefficient of determination (R^2) is 0.053. Only 5.3% variation in DPS is determined by the explanatory variable MPS. The simple correlation coefficient (R) between DPS and MPS of KFL is -0.23 and the multiple correlation coefficient between DPS,MPS, and EPS of KFC is 9.2%

4. The relationship between DPS and MPS of GFCL shows the coefficient of determination (R^2) is 0.42 that means 42% variation in MPS is determined by the explanatory variable DPS. The simple correlation coefficient (R) between DPS and MPS of GFCL is 0.646 and the multiple correlation coefficient between DPS,MPS and EPS of GFCL is 89.6%

5. The relationship between DPS and EPS of NABB shows the coefficient of determination (R^2) is 0.3025, which indicates that only 30.25% percent of the variation of EPS is determined the explanatory variable DPS. The simple correlation coefficient (R) between DPS and EPS of NABB is -0.55.The multiple correlation coefficient between DPS,EPS and MPS of NABB is 93%

6. The relationship between DPS and EPS of NFC shows the coefficient of determination (R^2) is 0.231 which indicates that only the 23.1% percent variation in EPS is caused by the explanatory variable DPS. The simple correlation coefficient (R) between DPS and EPS of NFC is -0.481 and the multiple correlation coefficient between DPS, MPS and EPS OF NFC is 89%

7. The relationship between DPS and EPS of KFL shows the coefficient of determination (R^2) is 0.04 Only 4% variation in DPS is determined by the explanatory variable EPS. The simple correlation coefficient (R) between DPS and EPS of KFL is 0.20 and the multiple correlation coefficient

between DPS,MPS and EPS of KFC is 9.2%

8. The relationship between DPS and MPS of GFCL shows the coefficient of determination (R^2) is 0.00185 that means 0.1% variation in EPS is determined by the explanatory variable DPS. The simple correlation coefficient (R) between DPS and MPS of GFCL is -0.043 and the multiple correlation coefficient between DPS,MPS and EPS of GFCL is 89.6%

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Dividend refers to that portion of a firm's net earnings which are paid out to the shareholders. Dividends serve as a sample, comprehensive signal of management's interpretation of firm's recent performance and its future prospects. The improved corporate dividend practice is thus an essential means to solve the problem of asymmetric information between management of newly established Nepalese companies and Nepalese investors who have poured their funds there in.

Every investor expects handsome earning on his/her share capital investment. The firm that is not able to distribute fair dividend, will not be able to raise further equity capital from capital market.

In Nepal, only a few listed finance companies have paying regular dividends to their shareholders. Moreover some finance companies 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. In this regards, however finance companies are also no exception.

There are the different factors that affect market price of stock such as dividend policy, earning. These factors also indicate the financial position of a firm. If a firm has good performance in terms of these factors, it will be able to increase the market price of share.

The study mainly aims to assess the factors which are affecting market price of stock. Its specific objectives are 1) to examine the influence

of dividend policy on stock price volatility 2) to analyze whether only dividend policy have influence on volatility of stock price 3) To provide the reliable and relevant suggestion on the basis of findings.

This study is based on secondary data. The relation between dividends and stock prices, earning and stock price, earning and dividend was accomplished by using secondary data of four finance companies listed in NEPSE Ltd. To analyze the properties of portfolios formed on dividend of high and low dividend paying finance company. The data on dividend, earning, and market price of share and dividend payout ratio of four finance companies for the period of 060/61-064/65 are collected. Out of 33 listed finance companies, four finance companies are selected for the sample finance companies.

The simple regression equation was formed to see the relationship between MPS and DPS. The results of different test reveal that there is positive relationship between MPS and DPS most of times. But for MPS it would not happen all the times that increase of EPS and DPS increase the MPS. But most of the time, there is negative relationship between DPS and EPS. The second multiple regression was formed to see the affect of DPS and EPS on MPS. It also concludes the fact that most of times, increase in DPS affects the positively MPS but most of the time, increase in EPS does not affect positively. So sometime increase in EPS would also affects the MPS and sometimes it would not.

Regression coefficient between DPS and MPS of NABB (-0.042) and KFL (-0.76) are negative. But in case of NFC and GFCL are positive. The constant (a) of NABB, NFC, KFL and GFCL are 303.11, 431.20, 204.55 and 144.10 respectively. The beta coefficient of NABB and KFL are negative

respectively which indicate that one rupee increase in dividend per share leads to decrease 0.042 and 0.76 in stock price. Similarly NFC has 0.30 and GFCL has 4.10 of regression coefficient. Which indicate that one rupee increase in dividend per share leads to increase of 0.30 and 4.10 in stock price. The value of coefficient of determents (R^2) is 0.00011, 0.046, 0.053 and 0.42 respectively. Accordingly to the respect finance companies, among them KFL has relatively high. It indicates that variation in the independent variables MPS explain 5.3% of the dependent variables DPS.

Regression coefficient between DPS and EPS of NABB (-0.042), NFC (-0.046) and KFL (-0.76) are negative. But in case of GFCL are positive. The constant (a) of NABBL, NFC, KFL and GFCL are 31.06, 42.067, 17.433 and 15.763 respectively. The beta coefficient of NABB,NFC and KFL are negative respectively which indicate that one rupee increase in Earnings per share leads to decrease 0.042 and0.76 in dividend per share .Similarly NFC has 0.30 and GFCL has 4.10 of regression coefficient. Which indicate that one rupee increase in earning per share leads to increase of 0.30 and4.10 in dividend per share. The value of coefficient of determents(R) is 0.3025, 0.231, 0.040 and 0.00185 respectively. Accordingly to the respect finance companies, among them NABBL has relatively high. It indicates that variation in the independent variables EPS explain 30.25% of the dependent variables DPS.

The multiple regression coefficient between DPS,MPS and EPS of NABB,NFC,KFL and GFCL are 0.93,0.89, 0.092 and 0.896

5.2 Conclusion

From this study it can be concluded that there is not any consistency in the dividend policy of the sample firms. Mostly there is a greater influence of dividend policy on stock price. No matter whether the banks are having more earning or low earning that has not great influence on stock price as compared to the influence of dividend policy on variation of market price per share. But there are also un- explanatory variables affecting to the volatility of market price per share. So it can be said that although EPS affects DPS but it is less concerned with MPS. Therefore the MPS is more or less dependent with DPS in the efficient capital market.

5.3 Recommendation

With respect to recommendation on dividend policy and stock price volatility, earning per share of all the sample finance companies are in fluctuating trend. Therefore these companies should search the fruitful investment opportunities, plan for profit maximization. Out of the four finance companies, the earning of KFL is in increasing trend. So they should search the investment opportunities. The correlation between MPS and DPS in the sample firm is positive and negative correlation. Therefore they should try to increase the DPS to better uplift the MPS in future. The DPS analysis shows that there is not any consistency of dividend policy in NFC as compared to other finance companies. So this bank needs to create somehow paying reasonable DPS every year. It is because higher DPS create positive attitude of shareholders towards bank, which consequently helps to increase the market value of the share. So there is a greater iNFCuence of DPS rather than EPS to MPS was found by multiple regression analysis for all the banks. Therefore, to improve MPS the banks are suggested to

increase the DPS, while considering other iNFCuencing variables upon the MPS.

Moreover, the test statistics shows that there is almost positive correlation between DPS and MPS in banks. So, banks should emphasize to pay the reasonable dividend. The information conveyed by the bank may have influence on the stock price. Therefore they are suggested to convey the fact and reliable information regarding the bank to the public or share investor. Sometimes, due to the lack of sufficient information and knowledge about the share market, that may also affect to MPS. So, every investor should have sufficient knowledge about the share market.

BIBLIOGRAPHY

A. Books:

Adhikari, Nabaraj, Corporate Dividend Practices in Nepal (Unpublished Master's Thesis T.U., 1999)

B. Journal and Periodicals:

Bhattari Manoj (2002), Dividend Policy and its Impact on Market Price of Stock (Unpublished Masters Thesis T.U., (2002)

Bhattari Rabindra, Capital Structure Management, (3rd edition, Dhaulagiri Books and Stationary, 2006)

Brealey, Richard A, Stewart, C. Myers, Principle of Corporate Finance, (6th edition, McGraw-Hill New Work, 2000)

C. UnPublished Thesis:

G. William Schewert, "Why does Stock Market Volatility Changes Overtime" The Journal of Finance Vol. XLIV, No.5, (Dec 1989)

Irwin Friend and Marshall Puckett "Dividend and Stock Prices" The American Economic Review, Vol. LIV, (Sept 1964)

James C. Van Horne, Financial Management and Policy, (12th edition, Prentice Hall of India Private Limited New Delhi, 2007)

Katwal, Bhabindra , Effect of Dividend on Share Price, Study of Selected Commercial Bank, (UnPublished Master Thesis T.U. ,2005)

M.Y. Khan and P.K. Jain, (1992), Dividend Policy Decision, Financial Management Text and Problems, (2nd edition, New Delhi, Tata McGraw – Hill Publishing Company Limited, 1992)

Mohammed Nishat and Chaudhary Mohammed Irfan, Dividend Policy and Stock Price Volatility, (Research Report.,2004)

R. Richordson Pettit "Dividend Announcement Security, Performance and Capital Market Efficiency" Journal of Finance, Vol. XXVII (1972)

R.K.S. Rao, The Dividend Policy Decision, Financial Management Concepts and Application, (2nd edition, New Work, Macmillan Publishing Company, s1992)

R.P. Mahapatra and P.K. Sahu "A Note on Determinants of Corporate Dividend Behaviour in India" Journal of Business, Vol. 20 (Jan-March 1993)

Richard I. Levin and David S. Rabin, Simple Regression and Correlation, Statistic for Management, (6th edition, Prentice Hall of India, New Delhi, 1995)

Rishi Raj Gautama, Capital Structure Management(1st edition, Asmita Publication,2008)

Robert J. Shiller "The Volatility of Stock Market Prices" Journal of Business, Vol. 235, (Jan 2, 1987)

Schell, Lawrence D. and Haley Charles W., Introduction to Financial Management,(6th Edition , Singapore: McGraw- Hill Book Inc., 1991)

Shrestha, Manohar Krishna , Financial Management Theory and Practice .(Kathmandu, Nepal Publication, 1992)

Viscione, Jerry A. and Roberts, Gordon S., Contemporary Financial Management,(New Delhi, McMillan Publishing Company,1987)

Watt Ross "Comments the Information Content of Dividend" Journal of Business, Vol. 49 (Jan 1976)

Watt Rsoss, "The Information Content of Dividend" Journal of Business Vol. 46 (1973)

Web Sites:

Western, J.F and Copeland, T.E., Dividend Policy, Management Finance, (8th edition, The Dryden Press, 1989)

Weston J. Fred and Brigham, Eugene F., Managerial Finance, (New York, Dryden Place, 1972)

Zvi Bodie, Alex Kane, Alan J. Marcus, Investment, (6th edition, TATA McGraw Hill, 2007)

www. Google. com.

www. nepal stock exchange.com.

www.search finance.com.

www.stock alpha.com.

ANNEX

From getting the actual results from the analysis, following are the main formula that are being used in the study.

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

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

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2}$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right)$$

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

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}}$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}}$$

Y=a+bx

Analysis of Earning per share

Years	NABB	NFC	KFL	GFCL	$X_1 - \overline{X_1}$	$X_2 - \overline{X_2}$	$X_3 - X_3$	$X_4 - \overline{X_4}$
060/61	31.82	42.15	2.77	15.65	16.08	71.06	261.14	0.0001
061/62	32.67	69.12	19.97	16.72	23.62	1253.16	1.082	1.1236
062/63	29.09	17.37	26.3	14.98	1.64	267.32	54.32	0.4624
063/64	23.92	25.36	20.04	18.45	15.31	69.89	1.23	7.7841
064/65	21.54	14.62	25.57	12.48	39.31	364.81	44.09	10.1124
Total	139.04	168.62	94.65	78.28	95.78	2026.24	361.86	19.4826
Mean $(\overline{X})$	27.81	33.72	18.93	15.66				
S.D.	4.89	22.51	9.51	2.21				
CV.	17.58	66.75	50.24	14.11				

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

NABB

$$\bar{X} = \frac{\sum X}{n} = \frac{309.04}{5} = 27.81$$

NFC

$$\bar{X} = \frac{\sum X}{n} = \frac{168.82}{5} = 33.72$$

KFL

$$\bar{X} = \frac{\sum X}{n} = \frac{94.65}{5} = 18.93$$

GFCL

$$\bar{X} = \frac{\sum X}{n} = \frac{78.28}{5} = 15.66$$

NABB

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{95.78}{5 - 1}} = 4.89$$

NFC

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{2026.24}{5-1}} = 22.5$$

GFCL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{361.86}{5-1}} = 9.51$$

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

NABB

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

$$= \frac{4.89}{27.81} \times 100 = 17.58$$

NFC

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

$$= \frac{22.51}{33.72} \times 100 = 66.75$$

KFL

$$CV = \frac{\sigma}{\bar{X}} \times 100$$
$$= \frac{9.51}{18.93} \times 100 = 50.24$$

GFCL

$$CV = \frac{\sigma}{\bar{X}} \times 100$$
$$= \frac{2.21}{15.66} \times 100 = 14.11$$

Analysis of DPS:

Year	NABB	NFC	KFL	GFCL	$X_1 - \bar{X_1}$	$X_2 - \overline{X_2}$	$X_3 - \overline{X_3}$	$X_4 - \overline{X_4}$
060/61	18	63.15	0	10.53	2621.44	13983.06	184.96	518.47
61/62	41.04	28.22	14.53	10.53	792.98	23464.11	0.8649	518.47
62/63	68.54	48.97	10	10.53	0.43	17537.70	12.96	518.47
63/64	165.78	582.5	43.54	69.09	9327.04	160881.21	896.40	1280.92
64/65	52.62	184	0	65.81	274.90	6.76	184.96	1056.9
Total	345.98	906.84	68.07	166	13017.45	215872.84	1280.14	3893.23
Mean $(\overline{X})$	69.2	181.4	13.60	33.3				
S.D.	57.05	232.31	17.89	160.90				
CV.	82.44	128.06	131.54	321.02				

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

NABB

$$\bar{X} = \frac{\sum X}{n} = \frac{345.98}{5} = 69.2$$

NFC

$$\bar{X} = \frac{\sum X}{n} = \frac{906.68}{5} = 181.4$$

KFL

$$\bar{X} = \frac{\sum X}{n} = \frac{680.7}{5} = 13.6$$

GFCL

$$\bar{X} = \frac{\sum X}{n} = \frac{166.49}{5} = 33.33$$

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

NABB

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{13017.45}{5 - 1}} = 57.05$$

NFC

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{215872.84}{5-1}} = 232.31$$

KFL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{1280.14}{5-1}} = 17.89$$

GFCL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{3893.23}{5-1}} = 31.20$$

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

NABB

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{57.05}{69.02} = 82.44$$

NFC

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{232.31}{181.4} = 128.06$$

KFL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{17.89}{13.6} = 131.54$$

GFCL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{31.20}{33.33} = 93.69$$

Analysis of MPS

060/61	165	360	205	180	18009.64	15775.36	116.64	10120.36
061/62	185	295	138	185	13041.64	36328.36	3158.49	9139.36
062/63	190	263	140	185	11924.64	49550.76	2937.64	9139.36
063/64	257	460	203	220	1780.84	655.36	77.44	3672.36
034/65	699	1050	285	633	1598400.04	318547.36	8244.64	124185.76
Total	1496	2428	971	1403	204596.80	420857.30	14534.80	156257.20

Mean $(\overline{X})$	299.20	485.60	194.2	280.60				
S.D.	226.16	324.36	60.28	197.65				
CV.	75.59	66.79	31.04	70.38				

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

NABB

$$\bar{X} = \frac{\sum X}{n} = \frac{1496}{5} = 299.2$$

NFC

$$\bar{X} = \frac{\sum X}{n} = \frac{2428}{5} = 485.6$$

KFL

$$\bar{X} = \frac{\sum X}{n} = \frac{971}{5} = 194.2$$

GFCL

$$\bar{X} = \frac{\sum X}{n} = \frac{1403}{5} = 280.6$$

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

NABB

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{204596.8}{5-1}} = 226.16$$

NFC

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{420857.2}{5-1}} = 324.36$$

KFL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{14534.8}{5-1}} = 60.28$$

GFCL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{156257.2}{5-1}} = 197.65$$

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

NABB

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{226.16}{229.2} = 0.7559$$

NFC

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{324.36}{485.6} = 0.6679$$

KFL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{60.28}{194.2} = 0.3104$$

GFCL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{197.65}{280.6} = 0.7038$$

Analysis of Dividend payout ratio

Years	NABB	NFC	KFL	GFCL	$X_1 - \overline{X_1}$	$X_2 - \overline{X_2}$	$X_3 - X_3$	$X_4 - \overline{X_4}$
060/61	0.566	0.498	0	0.67	4.60	54.20	0.436	2.341
061/62	1.26	0.408	0.727	0.63	2.10	55.33	0.004	2.465
062/63	2.36	2.82	0.380	0.703	0.125	25.40	0.078	2.241
063/64	6.93	22.97	3.74	3.74	17.81	228.31	2.289	2.372
064/65	2.44	12.58	0	5.27	0.07	22.28	0.436	9.423

Total	13.56	38.28	3.28	11.01	24.70	385.72	3.243	18.842
Mean $(\overline{x})$	2.71	7.86	0.66	2.20				
S.D	2.48	9.82	0.90	2.17				
CV.	91.51	124.94	136.36	98.64				

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

NABB

$$\bar{X} = \frac{\sum X}{n} = \frac{13.56}{5} 2.71$$

NFC

$$\bar{X} = \frac{\sum X}{n} = \frac{39.28}{5} = 7.86$$

KFL

$$\bar{X} = \frac{\sum X}{n} = \frac{3.28}{5} = 0.66$$

GFCL

$$\bar{X} = \frac{\sum X}{n} = \frac{11.01}{5} = 2.20$$

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{1280.14}{5-1}} = 17.89$$

NABB

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{24.70}{5-1}} = 2.48$$

NFC

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{385.72}{5-1}} = 9.82$$

KFL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{3.243}{5-1}} = 0.9$$

GFCL

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} = \sqrt{\frac{18.842}{5-1}} = 2.17$$

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

NABB

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{2.48}{2.71} = 91.51$$

NFC

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{9.82}{7.86} = 124.94$$

KFL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.9}{0.66} = 136.36$$

GFCL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{2.17}{2.20} = 98.64$$

Analysis of Dividend Yield ratio

Years	NABB	NFC	KFL	GFCL	$X_1 - \overline{X_1}$	$X_2 - \overline{X_2}$	$X_3 \quad \overline{X_3}$	$X_4 - \overline{X_4}$
060/61	0.11	0.17	0	0.08	0.03	0.04	0.006	0.004
061/62	0.22	0.01	0.10	0.06	0.004	0.12	0.0004	0.004
062/63	0.36	0.19	0.07	0.06	0.006	0.03	0.0001	0.004

063/64	0.64	1.27	0.21	0.31	0.13	0.83	0.02	0.036
064/65	0.07	0.17	0	0.10	0.04	0.04	0.006	0.0004
Total	1.40	1.81	0.38	0.59	0.21	1.06	0.0325	0.048
Mean $(\overline{X})$	0.28	0.36	0.08	0.12				
S.D	0.23	0.51	0.090	0.012				
CV.	82.14	141.67	112.5	91.67				

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

NABB

$$\bar{X} = \frac{\sum X}{n} = \frac{1.40}{5} = 0.28$$

NFC

$$\bar{X} = \frac{\sum X}{n} = \frac{1.81}{5} = 0.36$$

KFL

$$\bar{X} = \frac{\sum X}{n} = \frac{0.38}{5} = 0.08$$

GFCL

$$\bar{X} = \frac{\sum X}{n} = \frac{0.59}{5} = 0.12$$

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

NABB

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{0.21}{5 - 1}} = 0.23$$

NFC

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{1.06}{5 - 1}} = 0.51$$

KFL

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{0.0325}{5 - 1}} = 0.090$$

GFCL

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} = \sqrt{\frac{0.048}{5 - 1}} = 0.12$$

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

NABB

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.23}{0.28} = 82.14$$

NFC

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.51}{0.36} = 141.67$$

KFL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.090}{0.08} = 112.5$$

GFCL

$$CV = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.12}{0.12} = 100$$

Simple regression between DPS and MPS

NABB

Year	DPS(X)	MPS(Y)	XY	X^2	Y^2	$(X - \overline{X})^2$
060/61	18	165	2970	324	27225	2621.44

061/62	41.04	185	7592.4	1684.28	34225	792.98
062/63	68.54	190	13022.60	4697.73	36100	0.43
063/64	165.78	257	42605.46	27483	66049	9327.70
064/65	52.62	699	36781.38	2768.86	488601	274.90
N=5	345.98	1496	102971.84	36957.87	652200	13017.45

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = -0.42$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 302.11$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = -0.0105$$

$$r^2 = (-0.0105) = 0.00011$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 266.63$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 2.3$$

Y= a+bx

MPS = 296.29+ (-0.042)DPS

NFC

Year	DPS(X)	MPS(Y)	XY	X^2	Y^2	$(X - \overline{X})^2$
060/61	63.15	360	3987.92	129600	22734	13983.06

061/62	28.22	295	796.37	87025	8324.9	23464.11
062/63	48.97	263	2398.06	69169	12879.11	17537.70
063/64	582.5	460	339306.25	211600	267950	160881.21
064/65	184	1050	33856	1102500	193200	6.76
N=5	906.84	2428	380344.60	1599894	505088.01	215872.8

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = 0.30$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 431.2$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = 0.215$$

$$r^2 = (0.215) = 00.046$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 365.46$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 0.002$$

Y= a+bx

MPS = 431.2+ 0.30DPS

KFL

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X - \overline{X})^2$

060/61	0	205	0	42025	0	185.23
061/62	14.53	138	211.12	19044	2005.14	0.8464
062/63	10	140	100	19600	1400	13.03
063/64	43.54	203	1895.73	41209	8838.62	895.80
064/65	0	285	0	81225	0	185.23
N=5	68.07	971	2206.85	203103	12243.76	1280.14

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = 0 - 0.76$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 204.55$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = -0.23$$

$$r^2 = (-0.23) = 0.053$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 67.80$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 0.612$$

Y= a+bx

MPS = 204.55+ (-0.76) DPS

GFCL

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X-\overline{X})^2$

060/61	10.53	180	110.88	32400	1895.4	518.47
061/62	10.53	185	110.88	34225	1948.05	518.47
062/63	10.53	185	110.88	34225	1948.05	518.47
063/64	69.09	220	4773.43	48400	15199.8	1280.92
064/65	65.81	633	4330.96	400689	41657.73	1056.90
N=5	166.49	1403	9437.42	549939	62650.93	3893.23

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = 4.10$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 144.1$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = 0.646$$

$$r^2 = (0.646) = 0.42$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 174.1$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 2.79$$

Y= a+bx

MPS = 144.1+ 4.10DPS

Simple regression between DPS and EPS

NABB

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X-\bar{X})^2$
060/61	18	31.82	572.76	324	1012.51	2621.44
061/62	41.04	32.67	1340.78	1684.28	1067.33	792.98
062/63	68.54	29.09	1993.83	4697.73	546.23	0.43
063/64	165.78	23.92	3965.46	27483	572.17	9327.70
064/65	52.62	21.54	1133.43	2768.86	463.97	274.90
N=5	345.98	139.04	9006.26	36957.87	3962.21	13017.45

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = -0.047$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 31.06$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = -0.55$$

$$r^2 = (-0.55) = 0.3025$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 4.72$$

$$S_b = \frac{S_e}{\sqrt{\sum (X-\bar{X})^2}} = 0.0414$$

Y= a+bx

EPS = 31.06+(-0.47)DPS

NFC

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X-\bar{X})^2$

060/61	63.15	42.15	266.18	3987.92	1776.62	13983.06
061/62	28.22	69.12	1950.57	796.37	4777.57	23464.11
062/63	48.97	17.37	850.61	2397.86	301.72	17537.70
063/64	582.5	25.36	14772.2	339306.25	643.13	160881.21
064/65	184	14.62	2690.08	33856	213.74	6.76
N=5	906.84	168.62	20529.64	380344.60	7712.78	215872.84

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = 0. -0.46$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 42.067$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = -0.481$$

$$r^2 = (-0.481) = 0.231$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 39.54$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 0085$$

Y= a+bx

EPS = 42.067+ 0(-0.046) DPS

KFL

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X - \overline{X})^2$

060/61	0	2.77	0	0	7.67	185.23
061/62	14.53	19.97	290.16	211.12	398.80	0.8464
062/63	10	26.3	263	100	691.69	13.03
063/64	43.54	20.04	872.5	1895.73	401.60	895.80
064/65	0	25.57	0	0	653.82	185.23
N=5	68.07	94.65	1425.70	2206.85	2153.58	1280.14

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = 0.11$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 17.433$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = 0.20$$

$$r^2 = (0.20) = 0.04$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 10.75$$

$$S_b = \frac{S_e}{\sqrt{\sum (X - \bar{X})^2}} = 0.30$$

Y= a+bx

EPS = 17.433+ 0.11DPS

GFCL

Year	DPS(X)	EPS(Y)	XY	X^2	Y^2	$(X-\bar{X})^2$
060/61	10.53	15.65	110.88	244.92	164.79	518.47
061/62	10.53	16.72	110.88	279.56	176.06	518.47
062/63	10.53	14.98	1 10.88	224.40	157.74	518.47
063/64	69.09	18.45	4773.43	340.40	1274.71	518.47
064/65	65.81	12.48	4331.35	155.75	821.30	1056.90
N=5	166.49	78.28	9437.42	1245.03	2594.60	3893.23

$$b = \frac{n\sum XY - \sum X \sum y}{n\sum X^2 - (\sum X)^2} = -0.0031$$

$$a = \frac{\sum Y}{n} - \left(\frac{\sum X}{n} \times b\right) = 15.763$$

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \times \sqrt{n\sum Y^2 - (\sum Y)^2}} = -0.043$$

$$r^2 = (-0.043) = 0.00185$$

$$S_e = \sqrt{\frac{\sum Y^2 - a\sum Y - b\sum XY}{n-2}} = 2.53$$

$$S_b = \frac{S_e}{\sqrt{\sum (X-\bar{X})^2}} = 0.040$$

Y= a+bx

EPS = 15.763+ (-0.0031)DPS

Y=a+bx

EPS=15.763+ (-0.0031) DPS

Correlation between DPS and MPS

NAAB

YEAR(X)	DPS(X_1)	EPS(X_2)	MPS(X_3)
060/061	18	31.82	165
061/062	41.04	32.67	185
062/63	68.54	29.09	190
063/64	165.78	23.92	257
064/65	52.62	21.54	699
Total	345.9	139.04	1496

$$R_{1.23}=\frac{\sqrt{a\sum x1+b1\sum x1x2+b2\sum x1x3-n\overline{(x1)^2}}}{\sum_{x1}2-n(\overline{x1})^2}$$

=93%

NFC

YEAR(x)	DPS(X_1)	EPS(X_2)	MPS(X_3)
060/061	63.15	42.15	360
061/062	28.22	69.12	295
062/63	48.97	17.37	263
063/64	582.5	25.36	460
064/65	184	14.62	1050
Total	906.84	168.62	2428

$$R_{1.23}=\frac{\sqrt{a\sum x1+b1\sum x1x2+b2\sum x1x3-n\overline{(x1)^2}}}{\sum_{x1}2-n(\overline{x1})^2}$$

=0.89 i.e. 89%

KFL

YEAR(x)	DPS(X_1)	EPS(X_2)	MPS(X_3)
060/061	0	2.77	205
061/062	14.53	19.97	138
062/63	10	26.3	140
063/64	43.54	20.04	203
064/65	0	25.57	285
Total	68.07	94.65	971

$$R_1.23=\frac{\sqrt{a\sum x1+b1\sum x1x2+b2\sum x1x3-n\overline{(x1)}^2}}{\sum_{x1}2-n(\overline{x1\ })^2}$$

=0.09.2 i.e.9.2%

GFCL

YEAR(x)	DPS(X_1)	EPS(X_2)	MPS(X_3)
060/061	180	15.65	10.53
061/062	185	16.72	10.53
062/63	185	14.98	10.53
063/64	220	18.45	69.09
064/65	633	12.48	65.81
Total	*1403*	*78.28*	*166.49*

$$R1.23=\frac{\sqrt{a\sum x1+b1\sum x1x2+b2\sum x1x3-n\overline{(x1)}^2}}{\sum_{x1}2-n\overline{(x1)}^2}$$

=0.896i.e.89.6%

NABB

Year	DPS
060/61	18
061/62	41.04
062/63	68.54
063/64	165.78
064/65	52.62
N=5	345.98

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.935383344
R Square	0.874942
Adjusted R Square	0.749884
Standard Error	28.53013099
Observations	5

NFC

Year	DPS	EPS	MPS
060/61	63.15	42.15	360
061/62	28.22	69.12	295
062/63	48.97	17.37	263
063/64	582.5	25.36	460
064/65	184	14.62	1050
N=5	906.84	168.62	2428

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.36776267
R Square	0.13524938
Adjusted R Square	-0.72950124
Standard Error	305.512828
Observations	5

ANOVA

	df	*SS*	*MS*
Regression	2	29196.66855	14598.334
Residual	2	186676.1761	93338.088
Total	4	215872.8447	
	Coefficients	*Standard Error*	*t Stat*
Intercept	287.720707	479.5258795	0.6000108
X Variable 1	-3.5691228	7.860796445	-0.454041
X Variable 2	0.02885583	0.545437952	0.052904

KFL

Year	DPS	EPS	MPS
060/61	0	2.77	205
061/62	14.53	19.97	138
062/63	0	26.3	140
063/64	43.54	20.04	203
064/65	0	25.57	285
N=5	68.07	94.65	971

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.129014966
R Square	0.016644861
Adjusted R Square	-0.96671028
Standard Error	26.5385094
Observations	5

ANOVA

	df	*SS*	*MS*
Regression	2	23.84255763	11.92128
Residual	2	1408.584962	704.2925
Total	4	1432.42752	
	Coefficients	*Standard Error*	*t Stat*
Intercept	14.07113906	51.82054122	0.271536
X Variable 1	0.173700604	1.395143438	0.124504
X Variable 2	-0.02958441	0.220134494	-0.13439

ANOVA

	df	*SS*	*MS*	*F*
Regression	2	11389.51717	5694.758585	6.996289737
Residual	2	1627.936749	813.9683745	
Total	4	13017.45392		
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	749.407691	185.097090	4.04872755	0.05593526
X Variable 1	-20.4745762	5.48662170	-3.7317273	0.06489705
X Variable 2	-0.36085509	0.11932626	-3.0241042	0.09415749

GFCL

Year	DPS	EPS	MPS
060/61	10.53	15.65	180
061/62	10.53	16.72	185
062/63	10.53	14.98	185
063/64	69.09	18.45	220
064/65	65.81	12.48	633
N=5	166.49	78.28	1403

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.943179402
R Square	0.889587385
Adjusted R Square	0.779174769
Standard Error	14.66054448
Observations	5

ANOVA

	df	*SS*	*MS*
Regression	2	3463.379751	1731.69
Residual	2	429.8631287	214.9316
Total	4	3893.24288	
	Coefficients	*Standard Error*	*t Stat*
Intercept	-264.6368779	92.89256922	-2.84885
X Variable 1	14.93310715	5.105210017	2.92507
X Variable 2	0.228589282	0.057005421	4.009957