Chapter 1

Introduction

1.1 Background of the Study

Finance, the art and science of managing money, affects the life of every person and every organization. Finance is concerned with the process, institutions, markets, and instructions involved in the transfer of money among individuals, businesses, and governments. Managerial Finance (which is concerned with the duties of the financial manager in the business firm) is important in all types of businesses including banks and other financial institutions, as well as industrial and retail firms. It is important in government operations, schools, hospitals and any other types of organizations.

While the specifics vary among organizations, the key finance functions are investment, financing and dividend decisions for an organization. Funds are raised from external financial sources and allocated for different uses. The flow of funds within the enterprise is monitored. Benefits to financing sources take the form of returns, repayments, products and services. These functions must be performed in business firm, governments, banks, agencies, and non-profit organizations alike.

Now a days, every act or business involves a large amount of money. There is hardly anybody who can run a big business empire with his/her own financial resources. One way to operate big business or increase capital is by issuing shares. By issuing shares one can increase its capital and run the business smoothly. Issuing shares is sharing the ownership of the organization. Right amount of share issue is the best way of increasing capital. Here the management does not need to pay interest to the shareholders. So the firm does not have liability. If there is profit in the organization then it will reserve certain portion of profit and distribute other profit as dividend to the shareholders.

Dividend policy involves the decision to pay out earning versus retaining them for reinvestment in the firm. Any change in dividend policy has both favorable and

unfavourable effects on the firm's stock price. Higher the dividend means higher immediate cash flow to investors which is good, but lower future growth, which is bad. The dividend policy should be optimal which balances the opposing forces and maximizes stock price (Gautam & Thapa 2060).

Thus it is very relevant to know the dividend practices of organizations. Who will decide how much and when dividends are to be distributed in an organization? What are the factors that influence the decision making process of dividend distributions? To know these and much more about the dividend policies and practices in our country I chose the banking sector. Banking sector ranks at the top on the basis of share traded amount, no of share traded, number of transaction and price of share. (**Nepal Stock Exchange 2060/061**). I will study on joint venture banks like Nabil Bank Ltd., Nepal Investment Bank Ltd, Standard Chartered Bank ltd. and Himalayan Bank Ltd. and as my samples they rank **first, second, third and forth** bank among the commercial bank that issued shares to general public **(Nepal Rastra Bank 2061).**

1.2 Overview of the selected banks.

Nabil Bank Ltd:

Nabil Bank Limited: Nabil Bank Limited (Nabil) commenced its operation on 12, July 1984 as the first joint venture bank in Nepal. Dubai Bank Limited, Dubai was the first joint venture partner of Nabil. Currently, NB (International) Limited, Ireland is the foreign partner. Nabil Bank Limited had the official name Nepal Arab Bank Limited till 31st December 2001. This bank is pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with it head office located at Nabil House, Kamaladi, Kathmandu along with its **25 branches and 1 counters** all over the country. It is the only Bank having its presence at Tribhuvan International Airport. Also the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. The share holding pattern of Nabil Bank Ltd. is as follows: **N.B. International Limited-Ireland 50%, Nepalese Public 34.18 %, Nepal Industrial Development Corporation 6.15 %, Rastriya Beema Sansthan 9.67%, Nepal Stock**

Exchange Limited 0.33%. The bank has an Authorized Capital of Rs. 1,600 Million, Issued Capital of Rs. 689.22 Million and Paid Up Capital of Rs. 689.22 Million (6,892,160 shares of Rs. 100 each) – *(Nabil Bank: Annual Report 2007-08)*.

Nepal Investment Bank Ltd.:

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen had acquired 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd on April 2002. The name of the bank was changed to Nepal Investment Bank Ltd. upon bank's Annual General Meeting. The head office of the bank is located at Durbar Marg, Kathmandu and has 21 branches all over the country. The share holding pattern of Nepal Investment Bank Ltd. is as follows: **Group of Nepali Companies & Individuals 50%, Nepalese Public 20%, Rastriya Banijya Bank 15% and Rastriya Beema Sansthan 15%. The bank has an Authorized Capital of Rs. 1,000 Million, Issued Capital of Rs. 801.35 Million and Paid Up Capital of Rs. 801.35 Million (8,013,981 shares of Rs. 100 each) – *(NIBL: Annual Report 2007-08)*.**

Standard Chartered Bank Nepal Ltd.:

Standard Chartered Bank Nepal Ltd. (SCBNL) was established on Margh 16, 2043 B.S. as Nepal Grindlays Bank Limited. In the fiscal year 2000-2001, Nepal Grindlays Bank Limited commenced trading under its new name, Standard Chartered Bank Nepal Limited. This name change has been brought forth by the acquisition of ANZ Grindlays Bank Limited from the Australia and New Zealand Banking Group Limited by Standard Chartered Bank PLC on 31 July 2000. This acquisition gave Standard Chartered Bank the leading market position in the Middle East and South Asia Region. Standard Chartered is the world's leading emerging markets bank employing 30,000 people in over 500 offices in more than 50 countries. The banks head office is located at New Baneshwor, Kathmandu and has 12 branches all over the country. The share holding

pattern of Standard Chartered Bank Nepal Ltd. is as follows: Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. **The bank has an Authorized Capital of Rs. 1,000 Million, Issued Capital of Rs. 1,000. Million and Paid Up Capital of Rs. 620.78 Million (6,207,840 shares of Rs. 100 each) – *(SCBNL: Annual Report 2007-08)*.**

Himalayan Bank Ltd:

Himalayan Bank Ltd (HBL) was established in 1992 by the distinguished business personalities of Nepal in partnership with Employees Provident and Habib Bank Limited, one of the largest commercial bank of Pakistan. It is the first commercial bank of Nepal with maximum shareholding of the Nepalese private sector. The banks head office located at Tridevi Marg, Thamel, and Kathmandu and have 17 branches and 1 card center all over the country. The bank is also operating a counter in the premise of the Royal Palace. The bank has a very aggressive plan of establishing more branches in different parts of the Kingdom in the near future. Himalayan Bank's policies extend quality and personalized service to its customers as promptly as possible. All customers are treated with utmost courtesy as valued clients. To extend more efficient services to its customers, Himalayan Bank has been adopting innovative and latest banking technology. This has not only helped the Bank to constantly improve its service level but has also kept it prepared for future adoption of new technology.

The share holding pattern of Himalayan Bank Ltd. is as follows: **Group of Nepali Companies & Individuals 51%, Habib Bank Ltd. 20%, Nepalese Public 15% and Karmachari Sanchaya Kosh 14. The bank has an Authorized Capital of Rs. 1,000 Million, Issued Capital of Rs. 810.81 Million and Paid Up Capital of Rs. 810.81 Million (8,108,100 shares of Rs. 100 each) – *(HBL: Annual Report 2007-08)*.**

1.3 Statement of Problem

It has been seen that bank rates are generally very low in the present days though it has increased marginally in recent times. Most of the banks provide minimum rate of interest to their various depositors. People do not want to keep there money in Banks, they want to invest it in various business sectors. Purchasing shares of any type of business is the most likely way of investing. Most of the investors tend to buy shares that are having highest share prices. It has become necessary to know whether it is the best indicator for the decision maker. Does dividend distribution play any role in investor's investment decisions? General people don't know about dividend. Payment procedure, factors affecting dividend policy, dividend payout schemes, forms of dividend and the effect of these dividend forms to an investor. Thus I will try to learn about the trends of dividend distribution and find answers to above-mentioned questions.

Not only that the study will also try to find out whether there is any proper relationship between dividend and quoted market price of shares. Does distribution of the dividend match with the earnings of the banks? Does the return of the assets reflect on the market price of the shares? Thus I will do my study on dividend practices of commercial banks, a case study on four most renowned and profitable banks of our country Nabil Bank Ltd., Nepal Investment Bank Ltd, Standard Chartered Bank Ltd. and Himalayan Bank Ltd.

Various issues will be dealt for the purpose of this study. Basically this study will try to find out the matters relating to dividend decision and dividend practices in commercial banks. This study will try to solve the following research questions:

- Does dividend distribution play any role in investment decisions?
- What is the procedure of dividend distribution?
- What are the factors that affect dividend decision?
- Is there any relationship between the return on the assets and market price of the shares?
- Are the market prices of the shares affected by the dividend payout policies?
- What are the trends of dividend distributions in the financial institution?

- Does a financial institution follow a stable dividend policy?

1.4 Objective of the study

The main objective of this study is to know about dividend: who all can play vital roles in making a dividend policy in any organization; various factors that affect dividend policy in a financial institution, to know the procedure of dividend payout. This study will also try to find out whether investment decisions are influenced by dividend payout ratio or not. It will also find out trend of dividend distribution in banks. Thus the main objective of the study is to know matters relating to dividend distribution by financial institutions.
The study will find out the following:

- To find out the role of dividend in investment decisions.
- To identify out the commonly used procedure of dividend distribution.
- To find out the factors affecting dividend decisions.
- To find out the effect of dividend payout on market prices of the shares.
- To find out the trend and schemes of dividend distribution in the financial institutions especially banks.

1.5 Limitations of the study

This study may not fulfill all its objectives and the study may not be in detail because of limitations that may be faced while undergoing this study. The main limitations of this study will be:

- There are many banks in our country but this study limits to only two commercial banks.
- The study period covers data only for five fiscal years from 1998/1999 to 2002/2003
- The study will be done mostly on the basis of secondary data collected.

- As the study needs sufficient money in order to collect required information through various sources, the researcher could not afford it and the time dimension is very limited.
- There are many factors that indirectly affect dividend decisions. However only those factors that are directly related to dividend will be considered in this study.

1.6 Significance of the study

This study will be very useful to general people who want to know and learn about dividend policy. I am hopeful that this study will inform general people about the various aspects of dividend policy its significance and its impact on the share prices. Not only this I also think that this study is going to be helpful in their decision making process, especially the investment decision.

It will also be useful to the bank as the dividend policy of the company has become an effective way to attract new investors, to keep present investors happy and to maintain goodwill of the company.

1.7 Chapter Plan

This study has been divided into five major chapters which are as follows:

1. Introduction:

   The first chapter will deal with the background of the study; it will clearly identify statement of problem, define the objective of the study, be aware of its limitations, and finally comprehend significance of the study.

2. Literature Review:

In this chapter review of books related to dividend policy, financial journals and thesis will be done. Legal rules and factors affecting dividend policy will also be studied here. It includes conceptual framework on dividend.

3. Research Methodology:

Third chapter will deal with the introduction, research design, sources of data, population and selection of sample, method of analysis, financial and statistical tools.

4. Presentation, analysis, and interpretation of data:

This chapter will deal with the general introduction of sample banks. Analysis of financial indicators and result will be found out using various financial and statistical tools.

5. Summary conclusion and suggestions:

The fifth chapter summarizes the whole study. Moreover, it draws the conclusion and forwards the recommendation.

In the end there will be bibliography and appendices.

Chapter – II

Review of Literature

2.1 Concept of Dividend Policy

In this section the writer has tried to study the major findings and formulas formulated by experts, which has been internationally accepted and used in practice. This section will give the clear idea on the subject matter and how it has been dealt in the past around the world.

Dividend policy involves the decision to pay out earnings versus retaining them for reinvestment in the firm. Thus dividend policy has two opposite affects, and an optimal dividend policy strikes exactly the balance that investors in the aggregate want between current dividends and future growth and there by maximizes the price of the firm's stock. Any changes in dividend policy have both favorable and unfavorable effects on the price of the firm's stock. Higher dividend of the firms means higher cash flows to investors, which is essential for the investors, but lower future growth, which is not essential or bad for the investors. So the optimal dividend policy balances these opposing forces and maximizes the prices of the stock. (Brigham & Louis, 1985).

In early 1990's corporation's finance emerged as a distinct field of study as a part of economics. All types of management of an organization is basically concerned with (I) investment in assets and new products and (II) determining the best mix of financing and dividends in relation to a company's overall valuation. Investment of funds in assets determines the size of the firm, its profits from operation its liquidity and its business risk obtaining the best mix of financing and dividends determines the firm's financial charges and its financial risk, it also impacts its valuation. It was primarily descriptive study limited to the procurement of funds and external analysis of the firm. Different firms adopt different approaches to distribute dividend according to their objectives. If the firm aims to maximize shareholders' wealth then the firms should use large amount of earning

for payment of dividend. But if the firms aim to expand its business then the firm should retain profit (earning) to finance in investment program (Horne & James 1998)

A careful study of the relationship between profits after tax and dividends historically demonstrates that dividend changes in the aggregate lag behind profit changes and that the growth of dividends is much less volatile than the growth of profits after tax. (Terry 1988)

2.1.1 Walter's Study

James E. Walter studied on “Dividend Policy and Common Stock Prices" in 1966. His study helped to find out some important relationship between variables used in Dividend study. He advocated that dividend policy almost always affects the value of the firm. The relationship between firm's internal rate of return and cost of capital is determining factors to retain earnings or distribute dividend. As long as the internal rate of return is greater than the cost of capital, the stock price will be enhanced by retention and will vary with dividend pay out (Walter, 1996).

Some assumptions of his model are given below:

- All earnings are either distributed as dividend or reinvested internally immediately.
- With additional investments undertaken, the firm's business risk does not change. That is K and r is constant.
- The firm finances all investment through retained earnings i.e. debt or equity is not issued.
- The firm has very long (perpetual) life.
- The value of earnings per share and dividend per share are assumed to be constant forever.

Considering the above assumptions, the formula to calculate market price per share is as follows:

$$P=\frac{D+r/k(E-D)}{K}$$

Where,

P= Theoretical market price per share

D= Dividend per share

E= Earning per share

r = Internal rate of return

k=Cost of capital or market capitalization rate.

Walter displays his model with the help of the relationship between 'r' and 'k'. According to him optimum dividend pay out ratio on the basis of relationship between 'r' and 'k' can be summarized as follows:

Growth Firm(r>k)

When the internal rate of return is higher than cost of capital, the firm is said to be a growth firm. In this case, the relation between dividends and stock prices is negative; i.e. more dividends lead to low stock prices. In growth firm there is a good profitable opportunity. Walter argues that zero dividends would maximize the market price of shares. Since the firm reinvests retained earnings at the rate higher than cost of capital, the value per share will be maximum. Such a condition of a firm is benefited to the shareholders as their EPS retained and share value increases greater than they employ it in the market. When firm is in the condition of r>k, the market value of the share increased as pay out ratio declines.

Normal Firm(r = K)

If the firm has r=k, then there is not much of role of dividend on stock prices fluctuation. In such a condition, payment of dividend or retention of earnings does not affect the share price. It is the condition of indifference. The firm can either enjoy by paying profits as dividend or retain them. Even if the dividend is paid, the shareholders can reinvest outside the firm and earn the same amount i.e. the earning from retained profit. This is when r = k.

Declining Firm (r < K)

The relation between dividends and stock prices will be positive, i.e. increase in dividend per share yield increase in stock price if the firm's internal rate of return is less than the cost of capital. This type of firm is said to be a declining firm. There are no profitable investment opportunities to invest the earnings internally. Firm's earning rate would be less than the investor's minimum required rate as in the market. The investors who have invested in such firm like to distribute the earnings as dividend at all so that they can invest the fund in such profitable opportunities where they get higher rate of return than the declining firm. Walter argues cent percent dividend payment would maximize the market price of shares for declining firm.

To conclude, according to Walter, dividend policy depends upon the availability of investment opportunities of the firm, which we know from the relationship between 'r' &'k'. When r>k, firm has availability of profitable investment opportunities and so firm is to finance investment through retained earnings, when r<k firm has not availability of profitable investment opportunities and so the firm is to distribute all earnings and in case of r=k, firm is in the condition of indifference. In other words, in declining firm, dividends are positively correlated with share price. There is not any relationship between dividends and stock prices in case of normal firm. And, dividend is negatively correlated with stock prices in case of growth firm.

Limitations of the Model

Although this model has filled the gap of the knowledge of dividend policy and stock price, it has been criticized on some assumptions. Walter has assumed that only retained earnings finance the firm, which would be applicable to those firms, which have finances all by equity capital. Concerning to the Nepalese companies, 'r' &'k', dividend per share and earning per share may or may not be constant. Rate of return 'r' changes with increase and decrease of investment and cost of capital (K) changes with risk born by the company so 'r' and 'k' are not constant in Nepalese context. This model also ignores the effect of risk on the value of the firm. This is not the realistic assumption because risk &

return are positively correlated i.e. lesser the risk lower the return and higher the risk more the return.

2.1.2 Gordon's Study

Another popular model is developed by Myron J. Gordon (1962) which said that dividend policy of a firm affects its value even in a situation where the return on investment and required rate of return are equal. This study explains that investors are not indifferent between current dividend and retention of earnings with the prospects of future dividend and capital gain. The conclusion of this study is that investor gives more emphasis to the present dividend more than future capital gain. According to this study, an increase in dividend pay out ratio leads to increase in the stock price for the reason that the investor considers the dividend yield is less risky than the expected capital gain.

The concerning assumptions adopted in this model are as follows:

- No external financing is available in the market.
- The firm is an all equity-financing firm. i.e. no debt and preferred stock are issued.
- The cost of capital (k) and internal rate of return (r) are constant.
- The corporate tax rate does not exist.
- Cost of equity (ke) must be greater than growth rate (g)
- The retention ratio (b), once decided upon, is constant therefore the growth rate (g) = (b) is constant forever.
- The firm and its stream of earning are perpetual.

Considering the above assumptions, he has provided the following formula to determine the market value of a share.

$$P = \frac{E(1-b)}{Ke - br}$$

Where,

P= Market price of a share

b=Retention ratio

b.r= Growth rate in r, i.e. rate of return on investment of an all equity firm.

E=Earing per share

E(1-b) = Dividend per share

ke=Capitalization rate

1-b = Percentage of earning distributed as dividend.

Based on this study, we can get the following fact:

In case of Growth Firm

Share price tends to decline with the increase in pay out ratio or decrease in retention ratio, i.e., and high dividend corresponding to earnings leads to decrease in share price. so, stock prices and dividends are negatively correlated.

In case of Declining Firm

Share prices tend to rise in correspondence with rise in dividend pay out ratio. So, dividend and stock prices are positively correlated with each other.

In case of Normal Firm

Share prices remain constant in correspondence to the changes in dividend policies. So, dividend and stock prices are free from each other.

2.1.3 Modigliani and Miller's Study

Modigliani and Miller, considering dividend policy, came up with a comprehensive argument for irrelevancy concept regarding dividend policy. In their article published in 1961, for the first time in the history of finance, advocated that dividend policy does not affect the value of the firm, i.e. dividend policy has no effect on the share prices of the firm. they said that the value of the firm is determined by the earning power of the firm's assets or its investment policy that the manner in which the earning steam is split between dividend and retained earnings does not affect this value.

Thus, as per MM theory, a firm's value is independent of dividend policy. And, the critical assumptions included in this theory are as follows:

- The firm operates in perfect capital market. All the investors in market are rational for their attitude of investment. Information is available to all free of costs, no transaction cost and securities are infinitely divisible.
- No investor is large enough to influence the market price of securities, there is no flotation cost.
- Perfect certainty of future investment and profit of the firm.
- There are no taxes. Alternatively, there are no indifferences in tax rates applicable to capital gain and dividends.
- Risk of uncertainty doesn't exist.

Considering the above various critical assumptions, they provided the proof in support of their argument as in the following manner.

Step1:

The market price of a share of stack at the beginning of a 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.

Symbolically,

$$P_o = \frac{D1 + P1}{1+K}$$

where,

Po = Current or beginning market price of stock.

D1 = Dividend per share to be received at the end of the period.

k = Capitalization rate for firm in the risky class (assume constant)

p1 = Market price of a share at the end of the period

Step 2:

The total capitalized value of the firm, assuming no external financing, would be simply the number of shares time price each share;

Therefore, we have:

npo= $\underline{(D1+ P1)}$

$$1+K$$

where,

n = Number of equity shares at zero period

Step 3:

If the firm's internal source of financing, investment opportunity fall short of the funds required and Δn is the number of new share issued at the end of the period 1 at price $p_{i.}$ Then above equation (step 2) can be seen as:

$$np_o = \frac{nD_i + (n + \Delta N)\, p_i - \Delta\, n\, p_i}{k}$$

where,

n= No. of shares at the beginning

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

Step 4:

If the firms were to finance all investment proposals, the total amount of new share issued would be given as following equation:

$$\underline{\Delta} np_i = I - (E - n\underline{D_i})$$

$$\text{or, } \underline{\Delta} np_i = I - E + nD_i$$

Where,

Δnp_i = Amount came from selling new shares to finance the capital requirement

E = Total earning of the firm during the period

I = The total requirement of budget for capital budget

nD_i = Total dividend paid during the period

$(E - nD_i)$ = Total retained earnings

Step 5:

We get the new equation given below by substituting the value of nDi from equation of step 4 to equation of step 3.

$$np_o = \frac{nD_i + (n + \Delta N) - I + E - nDi_i}{1+k}$$

$$np_o = p_i \frac{(n + \Delta N) - I + E}{1+k}$$

Step 6: Conclusion:

Dividend does not play any role in the above equation. Thus, Modigliani and Miller argued and concluded that dividend policy does not have any effect to the share price.

Concerning to the Nepalese context, this theory doesn't have any impact, though this is very crucial for the financial decision. Critical assumptions significantly deviate when it is applied. In case of Nepal, the assumption of perfects capital market and rational investor is faulty assumption. Flotation cost, transaction cost and tax effect on capital gain is neglected by MM theory, which is not realistic in the practical life. Arbitrage arguments as described by this theory, applies only when there are very sensitive investors. This is not possible in our country, Nepal.

2.1.4 Van Horne and MC Donald's Study (1971)

There was a more comprehensive study on dividend policy and new equity financing, which was conducted by Van Horne and MC Donald during the end of 1968. The purpose of this study was to investigate the combined effect of dividend policy and new equity financing decision on the market value of the firm's common stocks. They explored some basic aspects of conceptual framework and empirical tests for two industries using a well known valuation model. i.e. a cross-section regression model. For the requirement of the data, they collected from 86 electric utility firms included on the COMPUSTAT utility data tape and 39 firms in the electronics and electronic component industries as listed on the COMPUSTAT industrial data tape.

Using different models or methodology, the comparison was conducted by them regarding those firms which pay dividends and engage in new equity financing with other firms in an industry sample. And the result was that, for electric utility firms in 1968, share value was not adversely affected by new equity financing in the presence of cash dividends, except for those in the highest new issue group and it made new equity a more

costly form of financing than the retention of earnings. The study made by them also shows that the payment of dividends through excessive equity financing reduces share prices. For electronics, electronic-components industry, a significant relationship between new equity financing and value was not demonstrated. In this way both of the authors show that the effect of dividend policy and new equity financing decision on the market value of the firms common stock.

2.1.5 H. K. Baker and Aaron L. Philips Study (1992)

The two major questions they addressed in this research were firstly, why do some managers continue to support stock dividends given the apparently limited benefits of these distributions to shareholders? Secondly, do managers view about the issues and motives for stock dividends differ based on the firms trading location the size for the stock dividends or the frequency of issuing stock dividend? Their sample included all firms that paid at least one stock dividend between 1998, and 1990, 100 NYSE/AMEX firms and 26 NASDAQ firms. They chose the 1938-40 years, first they wanted to study period to span several years to avoid any potential bias of using a single year. Second they wanted a period long enough to provide a large sample size, but short enough to ensure getting someone knowledgeable about the firms most recent stock dividend to answer the questionnaire.

The used questions are of following two parts.

Part I : It contained 15 closed end questions on issues drawn from the finance literature about stock dividends.

Part II: It contained 7 questions about stock dividend decision and four questions about the respondents' profile.

They sent a survey questionnaire and cover letter to the highest-ranking financial officer of each firm in early November 1991. Non-respondent received a follow up survey and another cover letter one month latter of the initial 312 questionnaires mailed, only 299 questionnaires were delivered of these 136 firms completed and returned them giving a response range of 45.6%.

Based on the survey the major findings were as follows:

1. Mangers believe that stock dividends enable them to express their confidence in the firm's future prospects: suggestion that stock dividend may have some information content.
2. Mangers strongly agree that stock dividends have a positive psychological impact on investors receiving them.
3. Management views on issues and motives about stock dividends differ little based on the firms trading location or the size of the stock dividends.

2.1.6 Banartzi, Michally & Thailer's Study (1997)

In journal of finance, in 1997, they studied to investigate whether the changes in dividend do signal the future or the past. For proper investigation they collected necessary data from the companies that trade on the New York Stock Exchange (NYSE) or from the American Stock Exchange (AMEX) for at least two years during the period 1979-1991. They excluded all foreign companies from the sample. The resulting samples contain 1025 firms and 7186 firms' year observation. That is the main sample they referred.

Many dividend theories, before their study, imply that changes in dividend have information content about the future earnings of the firm. Unlike many of the previous study, they utilize a large number of firms and events. They found that there is a very strong contemporaneous correlation between dividend changes and earnings (When dividends are increased earnings have gone up) but they are unable to find more evidence of a positive relationship between dividend changes and future earnings changes. Dividend increases are a signal about a permanent shift in earnings, rather than a signal about future earnings growth. To prove this theory, they compared two sets of firms that experience a similar earnings changes in a given year; the first group of firm also changes their dividends and the second did not change, in their findings, firms that increase dividend in year 0 have experienced significant earnings increase in Year 1 and 0, but show no subsequent expected earnings growth. Also the size of the dividend increased does not predict future earnings. And firm that cut dividend in year 0 have experienced a reduction in earnings in year 1, but the firms go on to show significant increase in future.

2.1.7 Gerald R. Jensen & James M. Johnson's Study (1995)

The study made by Gerald R. Jensen and James M. Johnson extends prior research by examining twenty one firm characteristics 3 years before and 3 years after a dividend drops. The objective of the study is to provide evidence regarding the motivation for a dividend drop. The information conveyed by a drop and the action taken by the management for both before and after a drop and the action taken by the management for both before and after a drop and the findings related to the objectives are as follows:

Information about dividend reductions is particularly relevant in light of recent research findings that firm earnings generally increase after a dividend reduction. In particulars they observed a drop in earnings before the dividend is reduced and an earnings increase thereafter. In the same study, stock prices follow a similar pattern; however, the rebound in stock prices following the dividend drop is not significant. The reaction showed by stock market suggests that dividend drops are viewed negatively by investors in spit of the ensuing earnings rebound.

The study shows more about the connection that dividend reductions are the consequences of reduced earnings and deteriorating liquidity positions and debt levels. While earnings and firm's financial condition rebound significantly after a dividend reduction, they identified several financial characteristics that suggest lingering problems. Also they concluded that after a dividend reduction, dividend drop firms tend to sell more fixed assets, purchase fewer fixed assets, spend less on research and development, and reduce employees at a faster pace. Finally, the evidence is consistent with the view that dividend –drop firms find it difficult to raise external financing. Overall, the results conducted by the author indicate that a dividend drop generally occurs at the low point of a firm's financial decline and marks the beginning of firm's restructuring activities.

2.1.8 Dr. Manohar Krishna Shrestha's Study (1981)

Dr. Shrestha has highlighted following issue in the articles"

- The expectation of HMG from the public enterprises are of two thins. (i) They should be in a position of paying minimum dividend (ii) Public enterprises should

be self-supporting in financial matters in future years to come but non of these two objectives are achieved by public enterprises.

- One reason for excessive government causes this inefficiency interferes in day to day affairs. On the other hand, high-ranking officials of HMG appointed as Directors of Board do nothing but simply show their bureaucratic personalities. Bureaucracy has been the enemy of efficiency and so led corporation to face losses. Losing corporations are, therefore, not in a position of paying dividends to government.
- Another reason is the lack of self-criticism and self-consciousness. Esman has pointed out that the lack of favorable leadership is one biggest constraint to institutional building. Moreover corporate leadership come, as managers are not ready to have self-criticism In fact, all so-called managers of corporations have not been able to identify themselves regarding what they can contribute as managers of corporation. So, HMG must be in apposition to develop a financial target to corporate investment by imposing financial obligation on corporations.
- The articles point irony about government biases that government has not allowed to follow an independent dividend policy and HMG is found to pressurize dividend payment in case of Nepal Bank Ltd. regardless of profit. But, it has allowed Rastriya Banijya Bank to be relieved form dividend obligation in spite of considerable profit.

He has suggested the need of criteria as:

i) Adopt a criteria guided policy to drain resources from corporation through the medium of dividend payment.

ii) Realization by managers about the cost of equity and dividend obligation.

HMG should follow the following criteria to trap the resources through dividend:

i) Proper evaluation of public enterprises on capability of paying dividend through corporate co-ordination committee.

ii) Circulation the information to all public enterprises brought the minimum rate of dividend.

iii) Imposition of fixed rates of dividend by government to financially sound public enterprises.

iv) Specifying performance criteria such as profit target in terms of emphasis, priorities, timing, and plans and developing a strategic plan, this is not just a statement of corporation aspiration but must be done to make those aspirations to reality.

v) Identification of objectives in corporation Act, company Act or special charter so as to clarify public enterprise managers regarding their financial obligation to pay dividend.

2.1.9 Radhe Shyam Pradhan's Study (1993)

The study conducted by him was based on the data collected from 17 enterprises form 1986 to 1990. He studied on "'Stock Market Behavior in Small Capital Market". He has attempted to assess some of the cross section behaviours of the stock market. This examines the relationship of equity market, market value to book value price earnings and dividend with liquidity, profit ability, leverage assets turnover and interest coverage. He focused his study on the relationship of dividend with liquidity, interest coverage, profitability, and assets turnover.

The main objectives of the study were as follows.

- To asses the stock market behaviour in Nepal
- To test the relationship of market equity, market value to book value, profitability, leverage, price earnings and dividends with liquidity, assets turnover and interest coverage.

Major findings presented in his study were as follows:

- The relationship between dividend per share and market price per share is positive.
- Higher the earnings on stock larger the ratio of dividend per share to market price per share.
- There is positive relationship between the ratio of dividend per share to market price per share and interest coverage.

- The relationships between dividends pay out and assets turnover ratios.
- Dividends pay out and profitability are positively correlated.
- Positive relationships between dividend payout and interest coverage.
- The negative relationship is notices between dividend payout ratio and leverage ratio.
- The relationship of dividend per share and earning per share with liquidity, assets turnover and interest coverage is positive and negative with leverage.

In conclusion, his findings are stocks paying higher dividend have higher liquidity, lower leverage, higher earnings higher interest coverage and higher turnover. However, leverage and liquidity ratios are more variable for the stocks paying lower dividend while earnings assets turnover and interest coverage are more variable for the stocks paying higher dividends.

2.2 Conceptual frame work

Here concept on dividend policy is being made clear. Clear concept on dividend policy will further help in the study to have deeper meaning and learn more on the subject matter.

2.2.1 Some legal notes on Dividend Policy in Nepal

Prior to 1997, there was no clear justification in Nepal Company Act regarding dividend policy so the responsibility to undertake required actions to protect shareholders interest was given to stock exchange center by securities exchange Act of 1983-84. But, this stock exchange center was not able to protect shareholders' interest. Now, The Nepal Company act – 1997, makes some legal provisions for dividend payments, which are mentioned below:

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

Section 47: It has prohibited company from purchasing its own shares. This section states that no company shall purchase its own share or supply loans against the security of its own shares.

Section 137: Bonus shares Sub-section (1) states that the company must inform the office before issuing bonus shares under subsection (1), this may be done only according to a special resolution passed by the general meeting.

Section 140: Dividend and sub-sections of this section are as follows.

Sub-section 1: Except in the following circumstances, dividends shall be distributed among the shareholders within 45 days from the date of decision to distribute them.

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

Sub-section 2: In case dividends are not distributed within the time limit mentioned in subsection (1), this shall be done by adding interest at the prescribed rate.

Sub-section 3: Only the person whose name stands registered in the register of existing shareholders at the time of declaring the dividend shall be entitled to it.

2.2.2 Factors effecting dividend distribution:

Dividend policy affects the financial structure, corporate liquidity, the flow of funds and investor's satisfaction. Management exercises the high degree of judgment to maintain dividend policy. In theory, once the organization's cost of capital and debt policy has been determined, dividend policy should automatically follow. (Weston and Brigham)

One of the main focuses of this study is the factor affecting dividend decision. Therefore, it is desirable to scrutinize the factors recognized as active variable in the determination of dividend in case of Nepalese companies and financial institutions.

Many considerations may affect a firm's decision about its dividends, some of them are unique to that company, and some of the more general considerations are given subsequently.

1. **Stability of earnings:** If the firm's earnings are relatively stable from the stand point of both cyclical fluctuations and long-term growth, then the dividend payout is likely to be higher.
2. **Legal rules:** Certain legal rules may limit the amount of dividends a firm may pay. These legal constraints fall into two categories. First, statutory restrictions may prevent a company from paying dividends. While specific limitations vary by state. Generally a corporation may not pay a dividend :
    a) If the firm's liabilities exceed its assets.
    b) If the firm's liabilities exceed its (retained earnings.) and
    c) If the dividend is being paid from capital invested in the firm.

    The second type of legal restrictions is unique to each firm and results from restrictions in debt and preferred stock contracts.
3. **Dividend to common stockholders can only be paid if there remain earnings after preferred dividend.**
4. **If there is sufficient accumulated capital, high dividend can be paid.**
5. **If there is scarcity of liquidity in the firm then the dividend cannot be paid or only a low dividend can be paid.**
6. **Tax position of stockholders:** Corporations closely held by a few taxpayers in high-income brackets are likely to have a lower dividend payout. Corporation widely held by small investors will tend to have higher dividend payouts.
7. **Age and size of firm**: A well-established or large firm has better access to the capital markets than a new and small firm. Hence, other things being equal, sufficient dividend can be paid by larger and older firm in compared to smaller and new firms.
8. **Need to repay debt:** It also influences the availability of cash flow to pay dividends.
9. **A high rate of assets expansion creates a need to retain funds rather than to pay dividends**.

10. **Dividend policy may be influenced by the management control considerations**. If the owners rely on internal financing in order to maintain control then the dividend payment will be reduced.
11. **Rate of growth and profit level**: Economic theory suggests that high growth rates are associated with higher profit margins. The higher the growth rate and the larger the prospective margins, the lower the dividend payout is likely to be.
12. **The tax position of the corporation affects the dividend payment policy**. Potential penalties for excessive accumulation of retained earnings may cause dividend payouts to be higher than economic and financial considerations alone would indicate.
13. **Consistency in payment of dividend** constitutes important aspect of dividend policy. Three major types of dividends are as follows:
    a) **Constant payout ratio**: According to this form of dividend policy, the fixed percentage of earnings is paid as dividends. Payment of dividend may be fluctuated proportionately to the volatility of earnings. These types of ratio reflect the capacity of firms to pay dividend.
    b) **Constant dividend per share**: Fluctuation in the earnings does not affect the payment of dividend to the shareholders. But when the firms are able to maintain the higher level of earnings, then the amount of dividend to shareholders is also increased.
    c) **Stable rupee dividend plus extra dividend**: In this types of policy, firms paid sum of regularly amount as dividend to its shareholders. When the firms are in boom period then extra dividend is paid above the regular dividend and if the firms are in normal condition then it cuts extra dividend per share and pays the regular dividend to its shareholders.
14. **Desire of shareholders**: Shareholders may be interested either in dividend incomes or capital gains. Wealthy shareholder in a high income tax bracket may be interested in capital gains as against current dividends. A retired and old person, whose source of income is dividend, would like to get regular dividend. In a closely held company, management usually knows the desires of shareholders. But in a widely held company, number of shareholders is very large

and they have diverse desires regarding dividends and capital gains. Some shareholders want cash dividends, while other prefers bonus share.

So, all the firms should consider the factors that affect the dividend policy. Only then, a dividend policy can be helpful in achieving the goal of maximization of value of shares and value of the firm. At last "optimum economic development of society will be served by diverse dividend policies as long as investors are permitted to have difference in objective".

2.2.3 Procedure to be followed while paying out dividends.

Firms usually pay dividends on a quarterly basis in accordance with the following payment procedures. (Gautam and Thapa 2060 B.S)

1. **Declaration date**: This is the day on which the board of directors declares the dividend. At this time they set the amount of the dividend to be paid, the holders of –record date, and the payment date.
2. **Holder-of-record date**: This is the date the company opens the ownership books to determine who will receive the dividend: the stockholders of record on this date receive the dividend.
3. **Ex-dividend date:** This date is four days prior to the record date. Shares purchased after the ex-dividend date are not entitled to the dividend.
4. **Payment date:** This is the day when dividend checks are actually mailed to the holders of record.

2.2.4 Dividend payout schemes

Stability or regularity of dividends is considered as a desirable policy by the management of companies. Most of the shareholders also prefer stable dividends because all other things being the same, stable dividends have a positive impact on the market price of the share. By stability, we mean maintaining its position in relation to a trend live preferably on that is upward sloping. Three of the commonly used dividend policies are as follows (Gautam and Thapa 2060 B.S.):

a) Constant dividend per share

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

b) Constant payout ratio

The ratio of dividend to earning is known as payout ratio. When fixed percentage of earnings is paid as dividend in every period, the policy is called constant payout ratio. Since earnings fluctuate, following this policy necessarily means that the rupee amount of dividends will fluctuate. It ensures that dividends are paid when profits are earned, and avoided when it incurs losses.

c) Low regular dividends plus extras

The policy of paying a low regular dividend plus extras in a compromise between a stable dividend (or stable growth rate) and a constant payout rate. Such a policy gives the firm flexibility, yet investors can count on receiving at least a minimum dividend. It is often followed by firms with relatively volatile earnings from year to year. The low regular dividend can usually be maintained even when earnings decline and extra dividends can be paid when excess funds are available.

2.2.5 A Study of Managers' Perception Regarding Dividend Decision

In the mid -1950s John Litner conducted a classic series of interviews with corporate managers about their dividend policies. His conclusion regarding how dividends are determined can be summarized in four points (Litner, 1956).

1. Most of the firms have long-run target dividend payout ratios.

2. Managers of the firms focus more on dividend changes than on absolute levels. Thus paying a $ 2.00 dividend is an important financial decision if last year's dividend was $ 1.00, but no big deal if last years dividend was $ 2.00.
3. Dividend changes follow shifts in long run, sustainable earning. Managers "smooth" dividends. Transitory earnings changes are unlikely to affect dividend payout.
4. Managers are reluctant to make dividend changes that might have to be reversed. They are particularly worried about having to rescind a dividend increase.

Another study made by Ramesh Bhatt and I.M. Pandey shows more about the perception of managers regarding dividend decision. The objectives of this study are to find out how managers perceive the question of dividend payment and retention. The study reveals a number of interesting conclusions in favour of dividend decision, which can be summarized in following ways.

- It is described that payment of dividend depends on current and expected earning as well as the pattern of past dividends. This tends to support Litner's findings in USA about forty years ago in 1985 same results are presented by Baker in USA. Similarly, it is pertinent to note that managers of companies in India would like their companies to continuously maintain payment of dividend. The managers do not consider liquidity to be a significant consideration in dividend policy.
- Managers consider that there is a positive relationship between payments of dividends and price of the share. They strongly believe that companies should strive to maintain an uninterrupted record of dividends payments and they should avoid making changes in dividend policy that might have to be reversed.
- Managers do consider that dividend policy helps in signaling the future prospects of the companies. They feel that companies should adequately communicate with share holders with regard to any change in dividend policy.

- Managers of the firms feel that share holders in low tax brackets prefer more dividends than low or no dividends.
- Managers consider about the payment of dividend that should be made even if companies have profitable investment opportunities.
- Managers' perceptions are in favour of dividend payment that must be continuously and consistently.

2.3 Review of Related Thesis

Prior to this thesis, several thesis's have been written by the students of Masters of Business Studies as well as Master of Business Administration. Out of them, relevant thesis to this study have been presented below.

Navaraj Adhikary (1999) submitted a thesis" Corporate Dividend practices in Nepal" for the fulfillment of master's degree. The study is based on primary and secondary data analysis. Necessary sample was taken from the NEPSE (1990-1997), all company that pay regular dividends. And for the purpose of primary data a 14 closed-end questionnaire were administered to 135 financial executives of different companies in Nepal. His objectives of the study were to test the relationship between dividend and stock price. He concluded that there is positive relationship between dividend per share to market price per share and interest coverage. He also said that the dividend pay out affects share prices for finance and non finance sectors differently. The value of coeffiendt of dividend observed to be higher for non fiancé sector than for finance sectors.

The study "Dividend policy of Joint Venture Banks in Nepal" conducted by Ramesh K.C.'s (1991) concluded the findings as follows.

- Joint venture banks in Nepal are growth bank.
- There market values per share are significantly fluctuated and traded on high price.
- Investments in their stocks are less risky.
- DPS of these banks is correlated with their EPS

- Retained earnings ratios of these banks are fluctuating in smaller proportion EPS is raised at the satisfactory level.
- Price earning ratio and earning yield ratios are inconsistent.
- Declaration of dividend rate is found higher in comparison to other sectors.

Bishnu Hari Bhattarai (1996) has submitted a thesis "Dividend Decision and its Impact on Stock Valuation" and concluded his findings as follows:

- There is a positive relationship between cash flow and current profit and dividend percentage of shares. The degree of relationship is almost perfect.
- Absence of special criteria to adopt pay out ratio has been found and it is observed that there is a negative relationship between pay out ratio and valuation of shares.
- Inflation rate in recent year is decreasing and market price of share is increasing. Nevertheless, the companies are not able to give required rate of return to the investors.
- Shareholders have foregone opportunity income in hope of getting higher return, but the companies have not been able to return even equal to risk free rate of return.

Sadakar Timilsina (1997) has submitted a thesis related to dividend policy. "Dividend and Stock Price: An empirical Study" is the topic chosen by him. The basic objectives of the study were:

- To find the impact of dividend policy on stock price, so that the relationship can be obtained.
- To identify whether it is possible to increase the market value of stock by changing dividend policy or pay out ration.
- To examine the relationship between dividend per share and stock price per share.

The major findings presented by him are as follows:

- Dividend pays out affects the share price differently in different sectors.

- In the sample companies, there is a positive relationship between dividend per share and stock price per share.
- Flexibility in dividend policy or dividend per share might help to increase the market price per share.

The main findings of Hari Ram Aryal (1997) regarding his work are as follows:

- The net profit and dividend per share were positively correlated in both the banks.
- Market price of the share is considerably higher than actual net worth.
- Dividend pay out ratio is not stable for the banks over years. Also there are no criteria to adopt pay out ratio.

Anjani Raj Bhattarai (1990) concluded that many companies were paying less than the expected cash dividend per share of the investors. In an average most companies were under rating expectation of investor and thereby resulting the low marketability of shares on the trading flour of stock exchange. Wide gap was recorded in the percentage of cash dividend paid by the listed public Ltd. companies. The expected percentage of dividends of investors was not matching with the actual percentage.

T. D. Pandey (1996) has summarized that we can see random practices on distribution of dividend in Nepalese companies. Shareholders have a high expectation that market prices of shares will be significantly higher than net worth which is fulfilled in the sample banks. Mostly the banks paid dividend only in profitable years. Instability of dividend and inconsistency in payout ratio is the most applied phenomena of Nepalese dividend distribution practices. Mostly joint venture banks are paying dividend more attractively than the companies promoted by the Nepalese promoters. However, joint venture banks are also not guided by an appropriate dividend policy. In case of regression results of market price per share on dividend per share, the beta coefficients are positive which indicates that there is positive relation between DPS and market price per share in two banks. In other words, increase in dividend per share result increase in market price per share. He also noted that a change in dividend per share affects the share price and net worth differently in different banks.

2.3 Research Gap

Various studies have been performed relating to various aspects of dividend policy, dividend distribution. Major findings and formulas has been formulated by researchers and these has been internationally accepted and used in practice. Not only in international level but also in national level few studies have been done. Many students of management faculty have also conducted their thesis on the very topic dividend schemes of financial institution of our county Nepal. Some has performed their study on manufacturing companies, some on finance companies and few have even studied on the commercial banks of our county. They have tried to find out relationship of dividend with various other financial indicators. From what has been read and studied it was found out that till now no one has studied or compared the dividend policy of the four most highly priced shares traded in Nepal Stock Exchange. This would be the first study to be conducted, that will compare the dividend policy of the four banks namely, Nabil Bank Ltd, Standard Chartered Bank Ltd., Nepal Investment Bank Ltd. and finally Himalayan Bank Ltd. this study will also try to find out what general people want either they prefer current dividend or capital gain.

This study will further help the business students to gain knowledge on the subject matter. Financial Institutions will also know about their position relating to dividend. They will also know what general people (share holders) want them to do, whether to retain earning or to distribute to them regardless of legal provision.

Chapter III

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the procedure or statistical tools used during the study period, which helped to find out the results have been pointed out and explained. Because of these methods of analysis, statistical tools and financial indicator, the study has the chance to prove its validity.

3.2 Research Design

This study deals with the dividend policy of bank. Various aspects of the dividend policy is carefully studied to find out variables relating to dividend and also find the effect of these variables on dividend policy. Descriptive and analytical research design has been adopted in conducting this research study.

Here primary data as well as secondary data is used to find out the results. A small survey conducted is the primary data. Financial books, journals, thesis, annual reports of the various banks are the source of secondary data.

These collected data's are carefully analyzed and results have been found out by using financial and statistical tools. Thus effort has been made to give a clear picture of the bank's dividend policy with the help of available data.

Some suggestions and recommendations are also given. The study performed helped to collect some finding and hence some recommendations are also given relating to the subject matter.

3.3 Source of Data

Basically the study is conducted on the basis of secondary data, which are related to the dividend policy, and all are directly obtained from concerned banks. Annual

reports of concerned banks are one of the main sources of financial data for conducting this study. Other supplementary information has been concerned with different institutions and regulating authorities like Rastra Bank, Security Exchange Board, Ministry of Finance and National Planning Commission etc.

3.4 Population and Sample

In Nepal, banks, finance companies and manufacturing companies have issued shares to general people. Among them commercial bank ranks first in share traded amount, share traded, number of transaction and stock price. Many commercial banks shares are traded actively in Stock market. It is not possible to study all of them due to different constraints. Therefore sampling technique will be used for the research. The population is as follows:

1. Nepal Bank Ltd.
2. Rastriya Banjiya Bank Ltd.
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd
5. Standard Chartered Bank Ltd.
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank ltd
9. Everest Bank Ltd.
10. Bank of Kathmandu ltd.
11. Nepal Industrial and Commercial Bank Ltd.
12. Machhapuchchhre Bank Ltd.
13. Kumari Bank Ltd.
14. Laxmi Bank Ltd.
15. Siddartha Bank Ltd.
16. Global Bank Ltd.
17. Citizens Bank International Ltd.
18. Prime Commercial Bank Ltd.
19. Sunrise Bank Ltd.

20. Bank of Asia Ltd.
21. Development Credit Bank Ltd.
22. NMB Bank Ltd.

Among these banks this study will be based on four banks whose shares are traded at the highest prices in the stock market. They are Nabil Bank ltd., Nepal Investment Bank Ltd., Standard Chartered Bank Ltd., and Himalayan Bank ltd. It would have been wonderful to cover as much as Banks for the study. But due to limitation of time and sources of data only four banks have been selected. The researcher hopes that these samples will help to generalize the output of this study.

The samples for this study are:

i) Nabil Bank Ltd.
ii) Standard Chartered Bank Ltd.
iii) Investment Bank Ltd.
iv) Himalayan Bank Ltd.

From the total population 18 % of the banks are taken here as sample.

3.5 Method of Analysis

Various financial and statistical tools have been used in this study. The analysis of data will be done according to pattern of data available. Mainly the analysis will be done by using financial tools, simple regression and correlation analysis.

The relationship between different variables related to study topic will be drawn out using financial and statistical tools are tabulated under different headings. Then, they are compared with each other to interpret the results. In this study, simple regression analysis has been used to study the influences of independent variables on dependent variables. It helps in studying the effect and the magnitude of the effect of simple independent variables on dependent variables. To determine whether the variable of earning per share is related to dividend decision, the following regression model has been applies.

$Y = a + bx_1$

Where,

Y = Dividend per share

a = Intercept

b = slope variables or relation

x_1 = Earning per share

This model has been applied to examine the relationship between the EPS and DPS of the banks in the current five Fiscal Year. Similarly the following regression model has been applied to determine whether the variables of net profits, market price of share, and net worth of the company is related to dividend per share.

$Y = a + bx_2$

Where,

Y = Dividend Per Share

x_2 = Net profits of the concerned banks

$Y = a + bx_3$

Where,

Y = Market Price Per Share

x_3 = Dividend Per Share

$Y = a + b\ x_4$

Where,

Y = Net Worth of concerned bank

x_4 = Dividend Per Share

The above mentioned "a" and "b" variables will be calculated with the help of following two normal equations.

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

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

Where,

'a' and 'b' are unknown variables

n = Number of observation in the sample

3.6 Financial Indicator

(a) Earning Per Share (EPS)

Calculation of EPS will disclose the banks earning power on per share basis. Comparison of EPS will tell whether the earning power per share has changed over the period of time or not. EPS is calculated by dividing the net profit after taxes by the total number of the common share outstanding.

$$EPS = \frac{\text{Net Profit after Taxes}}{\text{No. of Common Shares Outstanding}}$$

b) Dividend Per Share (DPS)

DPS indicated the part of earning distributed to the shareholders on per share basis. It is calculated by dividing the total dividend to equity shareholders by the total no. of equity share.

$$DPS = \frac{\text{Total dividend to ordinary shareholders}}{\text{No. of Common shares outstanding}}$$

c) Dividend Payout Ratio

This ratio reflects the percentage of the profit distributed to shareholders as dividend against the percentage that is retained as reserve for the growth of the any organization. It is calculated by dividing the DPS by the EPS.

$$\text{Dividend Payout Ration} = \frac{DPS}{EPS}$$

d) Price – Earning Ration (P/E ratio)

This ratio reflects the market value per share for each rupees of currently reported earning per share. It is calculated by dividing the market price per share by earning per share (EPS).

$$P/E \text{ ratio} = \frac{\text{Market value per share (MVPS)}}{\text{Earning Per Share (EPS)}}$$

e) Market Value Per Share to Book Value Per Share Ratio (MVPS)

This ratio shows the relation between market value per share and book value per share. It is calculated by dividing the market value per share by the book value per share.

$$\text{MVPS to BVPS} = \frac{\text{Market value per share (MVPS)}}{\text{Book Value Per Share (BVPS)}}$$

f) Dividend Yield Ratio

Dividend Yield Ratio shows the relationship between dividend per share and market value per share. It is calculated by dividing dividend per share by market value per share.

$$\text{Dividend Yield Ratio} = \frac{\text{Dividend Per Share (DPS)}}{\text{Market Value Per Share (MVPS)}}$$

3.7 Statistical Tools Used

To conduct the research and come up with some conclusions and findings, systematic method has been followed. Various statistical tools have been used in this study. Some of the main statistical tools used are shown below.

a) Percentage (%):

A percent is the number of hundredth parts of one number is of another. Percentage is being used to get the better idea on the calculations and coverage of the study.

b) Frequency Distribution (f):

In this device the various items of a series are classified into groups and the number of items falling in to each group is stated.

c) Arithmetic Mean ($\bar{X}$)

Arithmetic mean is the most popular and widely used measure of representing the entire data by one variable. It is calculated by dividing the sum of the values of the items by the numbers of items. Mean values of the different variables represent the average value for the study period. It gives the central tendency.

d) Standard Deviation (б)

Standard deviation is the most popular and most useful measure of dispersion and gives uniform, correct and stable results. The chief characteristic of standard deviation is that it is based on mean, which gives uniform and dependable results. A standard deviation is the positive square root of average sum of squares of deviations of observations from the arithmetic mean of the distribution.

e) Correlation:

Correlation is the measure of relationship between two or more characteristics of a population or sample. It measures the changes between the phenomenon.

f) The coefficient of correlation (r):

For the purpose of comparison and further analysis, it is necessary to get a numerical measure for the correlation between two variables. A relative measure of this type is calculated by coefficient of correlation. The data related to dividend over different years are tabulated and their relationship with each other is drawn out. In this study, the coefficient of correlation is calculated to know the relationship of dividend per share with earning per share, net profit, market price per share and net worth.

g) Coefficient of Determination (R^2)

The coefficient of determination is the primary way the extent, or strength, of the association that exists between two variables can be measured. It is the measure of the degree of linear association or correlation between two variables, one of which happen to be independent and other being dependent variable. It measures the percentage total variation in dependent variable explained by independent variables. The coefficient of determination value can have ranging from zero to one. If the regression line is a perfect estimator, R^2 will be equal to '+1'. Thus the value of R^2 is '0', when there is no correlation. In this study, coefficient of determination is calculated to know the degree of correlation of dividend per share with earning per share, net profit, market price per share and net worth.

h) Regression Analysis:

Regression Analysis is the measurement of the form of relationship between two or more sets of data. Regression analysis deals with the procedure of estimation or prediction of unknown values of one variable from known values of another variable.

i) F-test:

F-test is one among the various statistical measure of testing hypothesis. The sampling distribution of F-statistic depends only on the degree of freedom V_1 and V_2 . F-distribution is applied in testing (i) the equality of population variance (ii) the equality of several population means (iii) the significance of an observed sample correlation ratio and (iv) the linearity of regression. When we need to test the significance of the differences among more than two sample means, F-distribution is suitable technique, called the "Analysis of Variance". Using ANOVA technique we will be able to make inferences about whether our samples are drawn from populations having the same mean.

Chapter IV: Presentation and Interpretation of Data

This chapter is the heart of the thesis. Here statistical tools are being used on financial indicators and analysis is being done to give valid results and findings. Here relationship between financial indicators, their impact on dividend decision and many other issues relating to dividend policy have been sought out. Thus this chapter shall clarify some of the relationship of financial indicators as well as compare the result among the banks, find out variations and the common part.

4.1 Analysis of Financial Indicator Variables

Trend of financial indicators are shown here. Financial variables like earning per share, dividend per share, dividend payout ratio, price earning ratio, and other relations are calculated here.

4.1.1 Earning Per Share

Generally, the success and failure of any business firm depends on the earning capacity. The earning of any business firm also helps to evaluate the performance. Level of earning shows the status of goodwill of the firm in the market. Higher earning shows higher strength while lower earning shows weaker strength of business firms because the earning of any firm helps for its growth, expansion and diversification. So, all the business firms always seek to have more and more earning so that they could sustain efficiently in the competitive market.

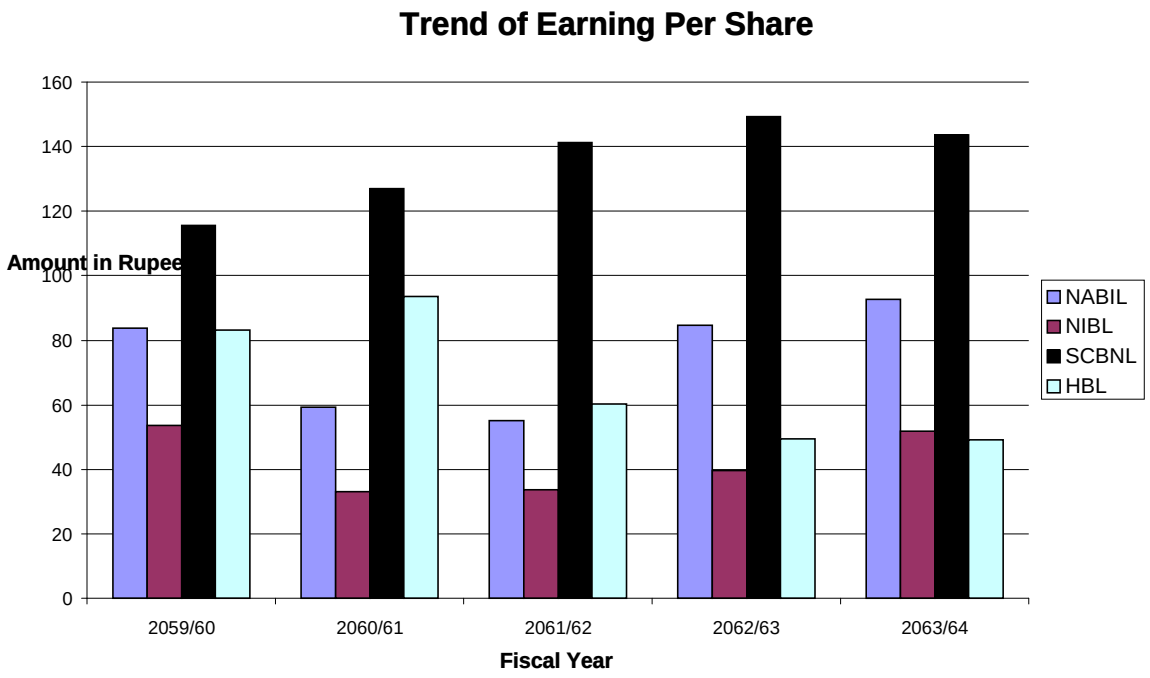
Earning Per Share is calculated by dividing total earning after tax by total number of shares outstanding. Below table shows the Earning Per Share of the four banks.

Table 4.1.1 Earning Per Share

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	83.79	59.26	55.25	84.66	92.61	75.11	16.72
NIBL	53.68	33.18	33.59	39.56	51.7	42.34	9.80
SCBNL	115.62	126.88	141.13	149.3	143.55	135.30	13.75
HBL	83.08	93.57	60.26	49.45	49.05	67.08	20.25

Source: Annual reports of the respective banks.

Chart 1



The above table and chart clearly shows that on an average SCBNL has the highest earning per share in the four banks. Second highest earning per share is earned by NABIL bank and third highest earning per share is earned that HBL and the least earning per share is earned by NIBL. Earning per share shows that the SCBNL, NABIL, HBL and NIBL have earned Rs. 135.30, Rs. 75.11, Rs. 67.08 and Rs. 42.34 per share respectively. The chart helps to clearly show that NABIL bank's EPS started at Rs. 84 and the EPS declined in the later years and started to rise from the year 2062/63. It is the same case with NIBL. It started at Rs. 54 and declined in the next year and gently started to rise from 2061/62. SCBN had an increasing trend till 2062/63 but slightly decreased in the year 2063/64.

4.1.2 Dividend Per Share

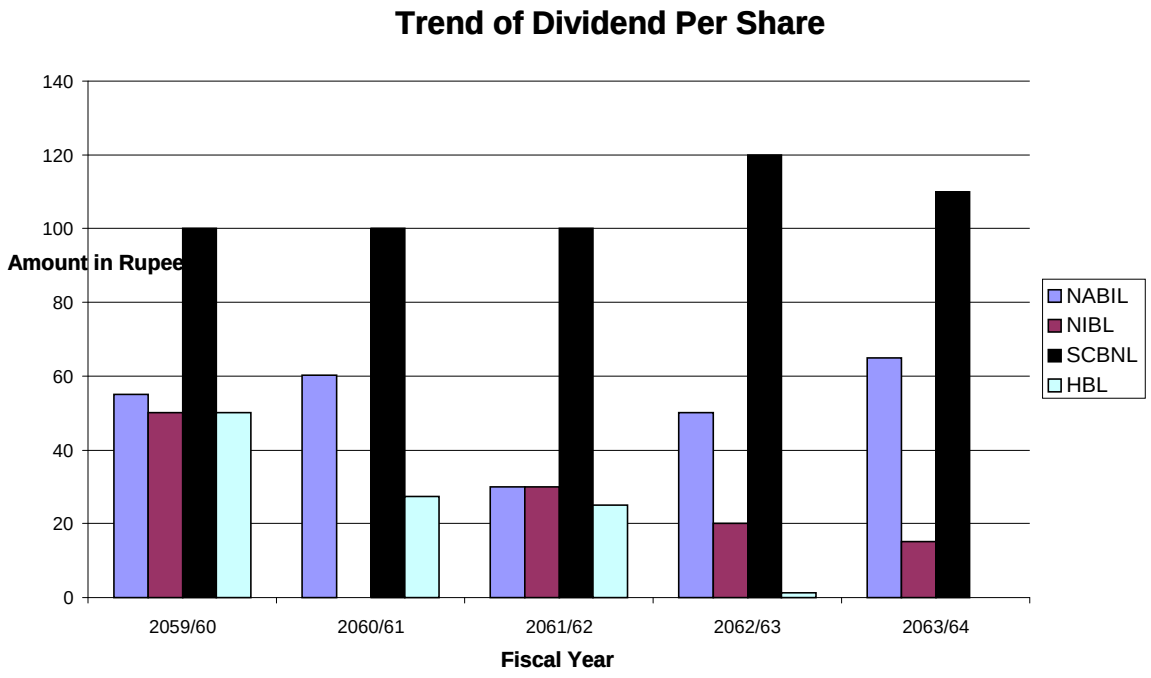
Dividend per share indicated the part of earning distributed to the shareholders on per share basis. It is calculated by dividing the total dividend to equity shareholders by the total no. of equity share. Generally higher the dividend higher the satisfaction level of shareholders. But there may be cases when shareholders prefer their dividends to be retained for future prospective. Dividend can only be provided when there is profit in any organization. So any company who is in a position to pay dividend means it is earning at least some profit. Dividend of the four banks of the target group is presented below.

Table 4.1.2 Dividend per share

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	55	60.11	30	50	65	52.02	13.53
NIBL	50	0	30	20	15	23.00	18.57
SCBNL	100	100	100	120	110	106.00	8.94
HBL	50	27.5	25	1.32	0	20.76	20.78

Source: Annual reports of the respective banks.

Chart 2



The above table shows the cash dividend provided to the shareholders in different years from 2059/60 to 2063/64. From the above table and chart it is obvious that SCBNL has given the maximum dividend on an average. It has given dividend Rs. 110 in the recent year 2063/64 and its minimum dividend is Rs. 100 in the first three consecutive years. Second bank who gave higher amount of dividend is NABIL. Its' average is Rs. 52 where as average of NIBL is Rs. 23 and HBL is Rs. 20.76. From the above table it can be seen that HBL distributed the least amount of dividend in the past five years in the four banks. Not only that, DPS is in decreasing trend in both the HBL and NIBL.

4.1.3 Dividend Payout Ratio

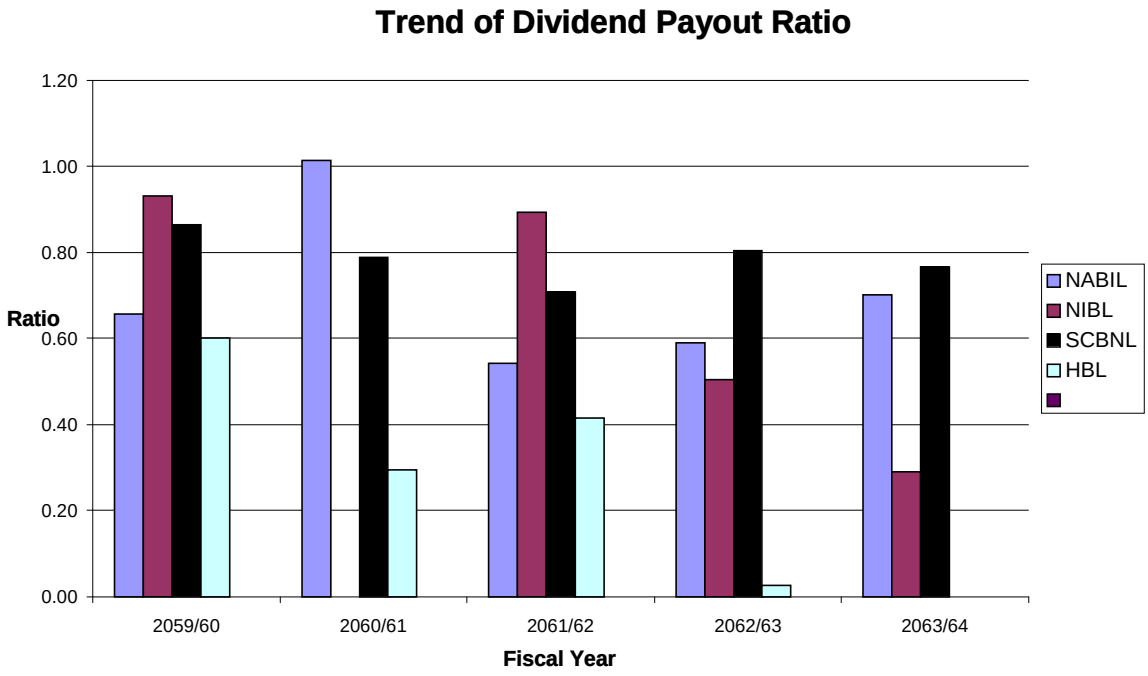
This ratio reflects the percentage of the profit distributed to shareholders as dividend against the percentage that is retained as reserve for the growth of the any organization. It is calculated by dividing the DPS by the EPS. How much profit is to be retained and how much of it is to be distributed to the shareholders is decided by the Board of Directors on the base of the government rules and regulation. Dividend Payout ration of the four selected banks are presented below.

Table 4.1.3 Dividend Payout Ratio

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	0.66	1.01	0.54	0.59	0.70	0.70	0.19
NIBL	0.93	0.00	0.89	0.51	0.29	0.52	0.40
SCBNL	0.86	0.79	0.71	0.80	0.77	0.79	0.06
HBL	0.60	0.29	0.41	0.03	0.00	0.27	0.26

Source: Annual reports of the respective banks.

Chart 3



The above table gives us the idea on how various the dividend payout strategies varies from one bank to another and in the same bank from year to year. From the above table we can see that NABIL bank distributes about 70% of its earning to shareholders, NIBL distributes 52% of its earning to shareholders and retains 48% of profit, while SCBNL distributes 79% of its earnings and retains 21% of its earning for future, whereas HBL distributes 27% of its earning to shareholders and retains the remaining 73% of its earning for the future growth. We can say that SCBNL and NABIL are in a strategy to distribute earnings rather than reserve it where as NIBL retains about half its earning and HBL retains the most % of its earning for the future. NABIL bank distributed 101 percent of its earning in the year 2060/61. Here bonus distributed is also added in dividend.

4.1.4 Price Earning Ratio

The ratio of market value per share and Earning Per Share is Price Earning Ratio. Price Earning Ratio shows the standing of the share in the capital market. In general we may think that market value per share have some link with earning per share. Or the market

price per share is determined by the earning per share. But this may not always be true. The table below shows the Price Earning Ratio of the study group banks.

Table 4.1.4 Price Earning Ratio

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	16.71	25.31	12.67	8.74	10.80	14.85	6.55
NIBL	26.10	34.66	22.63	20.10	18.18	24.33	6.49
SCBNL	17.17	16.90	11.16	10.98	12.16	13.67	3.10
HBL	20.46	16.03	16.59	16.91	17.13	17.42	1.75

Source: Annual reports of the respective banks.

Chart 4

From the above table it is clear that among the four banks in the five consecutive years, NIBL has the highest Price Earning Ratio on the fiscal year 2060/61 ie 34.66. On an average also in the five consecutive years NIBL has the highest Price Earning Ratio among the four banks. HBL is the bank with the second highest Price Earning Ratio on an average. NABIL falls on the third and SCBNL has the least Price Earning Ratio on an average. From the chart we can see that there are variations in the ratios in the early years but in the later years the there is not much difference in the P/E ratio of the four banks.

4.1.5 Market Value Per Share/Book Value Per Share

The ratio between Market Value Per share and Book Value Per Share gives the idea on the difference between the book value of a share i.e. the real value of the share and market value ie the price the share will earn if sold. In general it may be thought that book value per share and market value per share will be of about the same value. But the calculation of this ratio gives a slightly different picture, which is shown below in the table.

Table 4.1.5 Market Value Per Share/Book Value Per Share

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	5.58	6.94	3.00	2.77	3.32	4.32	1.84
NIBL	4.62	4.17	2.47	3.68	3.81	3.75	0.80
SCBNL	6.64	6.55	4.33	4.07	4.37	5.19	1.29
HBL	4.69	3.76	2.54	1.88	1.97	2.97	1.22

Source: Annual reports of the respective banks.

Chart 5

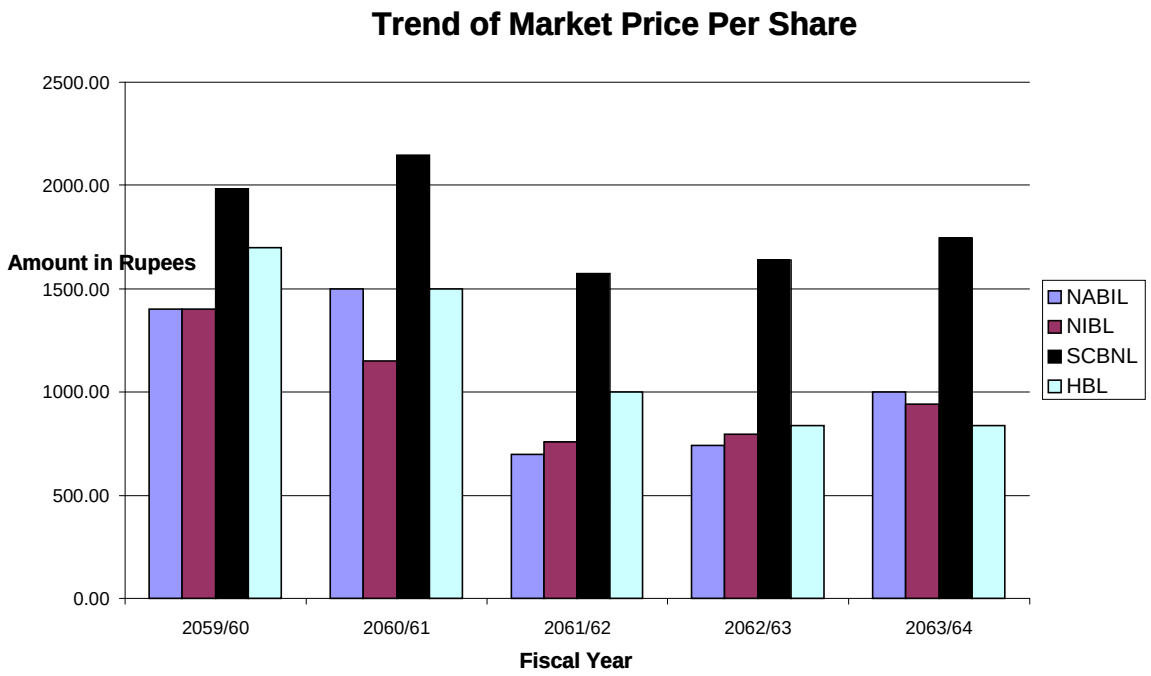


Chart 6

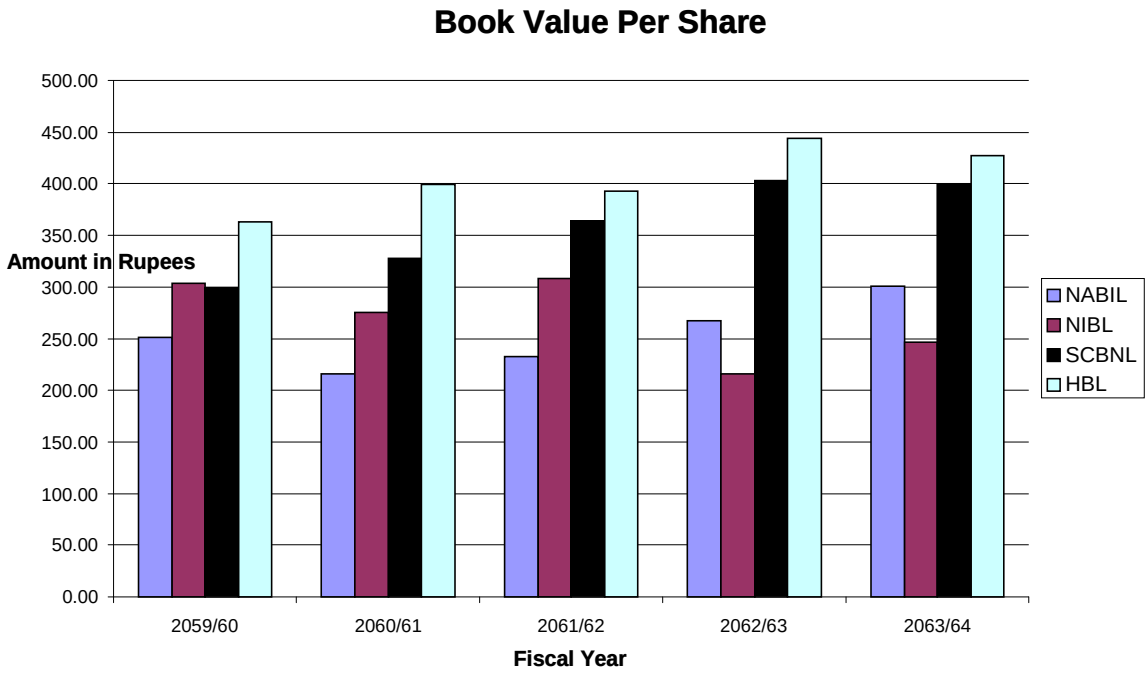
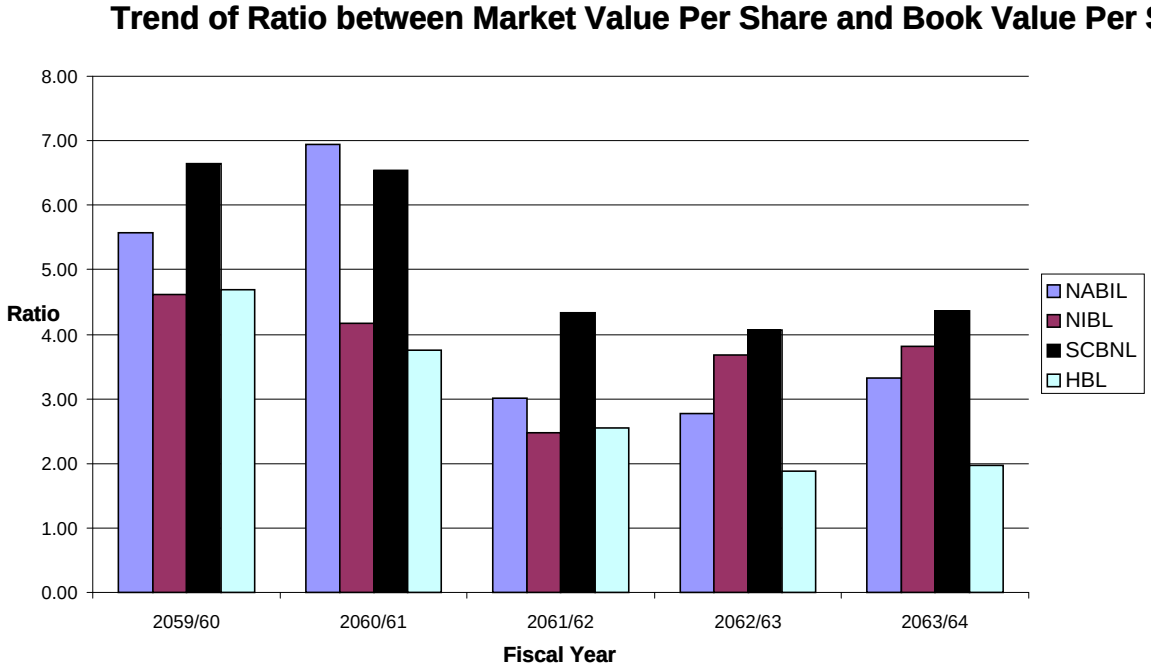


Chart 7



From the above table it is clear that market value per share is not always equal to book value per share. Sometimes the market value per share is six and half times higher than

the book value per share like in the year 2059/60 and 2060/61 of SCBNL. At some other times the market value is not even twice as the book value like in the year 2062/63 and 2063/64 of HBL. To see on an average market value per share ranges from 2 times higher than book value per share to five times higher than the book value per share. SCBNL's market value is 5 times compared to book value which is the highest among the four study focused banks.

4.1.6 Dividend Per Share/Market Value Per Share

The main focus of this study is dividend policy. Hence in this research it has been tried to find out most of the things relating to dividend policy. Here a ratio between dividend per share and market value per share has been calculated. This relation is being calculated to find out if there is any consistency in the dividend per share and market value per share of the four banks in the five consecutive years.

Table 4.1.6 Dividend Per Share/ Market Value Per Share

Bank/year	2059/60	2060/61	2061/62	2062/63	2063/64	Ave	Std. dev
NABIL	0.04	0.04	0.04	0.07	0.07	0.05	0.01
NIBL	0.04	0.00	0.04	0.03	0.02	0.02	0.02
SCBNL	0.05	0.05	0.06	0.07	0.06	0.06	0.01
HBL	0.03	0.02	0.03	0.00	0.00	0.01	0.01

Source: Annual reports of the respective banks.

From the above table, it is clear that 7% of market value per share is the highest percentage of dividend on it. NABIL and SCBNL has 7% of its market value as dividend in the years 2062/63 and 2063/64 respectively. Because NIBL and HBL did not distribute dividend in certain years there are some 0% of market value per share dividend distributed seen in the above table.

4.2 Correlation Analysis of Dividend and other different variables.

This analysis tool measures the relationship between two data sets that are scaled to be independent of the unit of measurement. The population correlation calculation returns the covariance of two data sets divided by the product of their standard deviations

You can use the Correlation tool to determine whether two ranges of data move together ie, whether large values of one set are associated with large values of the other (positive correlation), whether small values of one set are associated with large values of the other (negative correlation), or whether values in both sets are unrelated (correlation near zero).

4.2.1 Correlation Analysis between DPS and Share Traded Quantity

Here the correlation of DPS and share-traded quantity is being calculated. This is being calculated to find out if dividend decisions made by the banks bring any change in the quantity of share traded in Nepal Stock Exchange Limited.

Table 4.2.1 Correlation Analysis between DPS and Share Traded Qty.

Bank/year	2063/64	
	DPS	Traded Qty.
NIBL	50	51080.00
HBL	50	178700.00
NABIL	55	88790.00
SCBNL	100	38740.00
Correlation	-0.55	

Source: Annual reports of the respective banks and web site

The above calculation gives the correlation between dividend per share and share-traded quantity. The data is taken from the year 2063/64. The correlation of DPS and traded quantity for the year 2063/64 is –0.55. This tells that there is slightly negative relation between the DPS and share-traded quantity. When the dividend of the any bank is increased that year the share-traded quantity tends of the bank will tend to decrease. Lower the dividend distribution; higher will the share-traded quantity. This may mean that when any bank distributes dividend the shareholder of the very bank would prefer to keep the share rather than selling it.

4.2.2 Correlation Analysis between DPS and Stock Traded Amount

Here correlation between DPS and stock traded amount is calculated. Sometimes even if the numbers of transactions are higher the stock traded amount may be less and on contrary lower number of stock traded can lead to higher amount of the transaction. So to find the clearer picture of the reaction on dividend per share correlation of DPS and traded amount is also being calculated. Following table shows the stock correlation analysis between DPS and stock traded amount.

Table 4.2.2 Correlation Analysis between DPS and Stock Traded Amt.

Bank	DPS	Traded Amt.
NIBL	50	41.39
NABIL	55	73.96
SCBNL	100	64.32
HBL	50	152.15
Correlation	0.32	

Source: Annual reports of the respective banks and web site

Above table shows a positive relationship between DPS and stock traded amount. This means higher the dividend per share higher is the stock traded amount in the respective banks. Lower the dividend per share lower will be the stock traded amount.

4.2.3 Correlation Analysis between DPS and Number Of Transaction Of Shares.

Correlation Analysis between DPS and Number of transaction of shares calculation is another way of finding out the response to change in dividend per share by the stock market. The table below will give the clearer picture.

Table 4.2.3 Correlation Analysis between DPS and Number of transaction of shares

Bank	DPS	Number of Transaction of Shares
NIBL	50	613
NABIL	55	902
SCBNL	100	867
HBL	50	865
Correlation	0.48	

Source: Annual reports of the respective banks and web site

There is a positive correlation between DPS and Number of transaction of shares. Meaning more transaction of shares takes place when the DPS of the bank is higher. Lower the DPS; lower will be the number of transaction.

4.2.4 Mean Standard Deviation and Correlation of Dividend Per Share with Earning Per Share, Net Profit, Market Price Per Share and Net Worth.

Table 4.2.4 Mean Standard Deviation and Correlation of Dividend Per Share with Earning Per Share, Net Profit, Market Price Per Share and Net Worth.

					Correlation with				
Bank	Variables	Cases	Mean	S.D	DPS	EPS	NP	MPPS	Nw
NABIL	DPS	5	52.02	13.53	1.00	0.60	0.57	0.62	0.41
	EPS	5	75.11	16.72	0.60	1.00	0.91	0.16	0.89
	Np	5	344.20	88.14	0.57	0.91	1.00	-0.26	0.93
	MPPS	5	1068.00	368.94	0.62	0.16	-0.26	1.00	-0.36
	Nw	5	253.60	32.68	0.41	0.89	0.93	-0.36	1.00
NIBL	DPS	5	23.00	18.57	1.00	0.53	-0.16	0.34	0.48
	EPS	5	42.34	9.80	0.53	1.00	0.55	0.50	-0.05
	Np	5	91.10	42.26	-0.16	0.55	1.00	-0.30	-0.75
	MPPS	5	1009.20	267.44	0.34	0.50	-0.30	1.00	0.42
	Nw	5	270.03	38.71	0.48	-0.05	-0.75	0.42	1.00
SCBNL	DPS	5	106.00	8.94	1.00	0.74	0.69	-0.50	0.80
	EPS	5	135.30	13.75	0.74	1.00	0.93	-0.80	0.97
	Np	5	469.60	58.14	0.69	0.93	1.00	-0.70	0.98
	MPPS	5	1817.80	239.91	-0.50	-0.80	-0.70	1.00	-0.74
	Nw	5	358.53	45.27	0.80	0.97	0.98	-0.74	1.00
HBL	DPS	5	20.76	20.78	1.00	0.79	-0.33	0.91	-0.97
	EPS	5	67.08	20.25	0.79	1.00	0.17	0.93	-0.72
	Np	5	237.32	32.86	-0.33	0.17	1.00	-0.13	0.24
	MPPS	5	1175.20	399.69	0.91	0.93	-0.13	1.00	-0.85
	Nw	5	405.42	31.62	-0.97	-0.72	0.24	-0.85	1.00

Source: Annual reports of the respective banks

The above is a comprehensive table. It gives relation among various variables of the four banks. Most of the relations have been explained and shown in the previous part of this thesis so much explanation is not given in this section. From the above table correlation between each variable with the other in calculated and shown clearly. From the above table it is clear that DPS has positive relation with all the factors EPS, NP, MPPS and Nw. in NABIL. There is positive relation of DPS of NIBL with all the factors except NP.

There is positive relation of DPS of SCBNL with all the factors except MPPS. There is positive relation of DPS of HBL with EPS and MPPS and negative relation with NP and Nw.

In NABIL, EPS has positive relationship with all the factors. EPS of NIBL and HBL has positive relation with all the factors except Nw. EPS of SCBNL has positive relationship with all the factors except MPPS.

In NABIL , Np has positive relation with all the factors except MPPS. In NIBL NP has negative relation with all the factors except EPS. Np of SCBNL has positive relation with all the factors except MPPS. NP of HBL has positive relationship with EPS and Nw.

4.3 Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationship between two (or more) variables and to make estimation (or prediction) of one variable on the basis of the other variables. In other words, regression is that statistical tool with the help of which the unknown value of two variables can be estimated (or predicted) on the basis of known value of the other variable. Assuming that the two variables are closely related we can estimate the value of the one variable from the given value of another.

Here, dividend per share & earning per share, dividend per share & net profit, dividend per share & market price per share & dividend per share & net worth are taken to analyse how dividend variable interact with other variables. It is clearly presented below, the simple relationship between dividends per share & earning per share, dividend per share & net profit, dividend per share & net worth. The result of simple regression of the sample banks based on the data is presented below. The regression equation of Y on X determines the variation in the values of Y for given change in X.

4.3.1 Regression Analysis of dividend per share on earning per share

Regression analysis of dividend per share on earning per share will show the relationship between the two variables. Here regression calculation will show the effect of increase or decrease in EPS on DPS. If positive value of b is obtained then it shows that there is a positive relationship of EPS with DPS. Regression value 'a' indicates the minimum amount of DPS that is possible. Calculation of regression value of each bank has been done and presented below.

Table 4.3.1 Regression result of dividend per share on earning per share

(DPS = a + bEPS)
(Y = a + bX)

Banks	Sample size	Regression Coefficients	
		a	b
NABIL	5	15.57	0.49
NIBL	5	-19.85	1.012
SCBNL	5	41.19	0.479
HBL	5	-33.82	0.8136

Source: Annual reports of the respective banks

From the above table regression coefficient (b) of NABIL is 0.49. This indicates that one rupee increase in EPS leads to Rs. 0.49 increase in Dividend per share in NABIL assuming other values to be constant. Also the value of (a) is 15.57. This indicates that DPS of NABIL won't fall below Rs. 15.57

NIBL has a negative value for constant (a). This means that there may be cases when dividend is not distributed at all. As NIBL did not pay any dividend in the year 2060/61 it is possible that it does not pay dividend in the future as well. Regression coefficient of b is 1.012. This indicates that one rupees increase in EPS of NIBL there will be an increase of Rs. 1.012 in dividend distribution.

Similarly value of constant (a) in SCBNL is 41.19. This indicates that DPS of SCBNL will not fall below Rs.41.19 and the value of regression coefficient is 0.479 meaning one rupees increase in the value of EPS will lead to increase in Rs. 0.479 in DPS.

Constant value (a) of HBL is negative. This indicates that HBL may not distribute dividend at all. Regression coefficient of HBL is 0.8136. This indicates that one rupees increase in EPS of HBL will lead to increase by Rs. 0.8136 in DPS keeping other variables constant.

From the above table it is clear that SCBNL has the highest value of projected minimum value of DPS. Since the constant value of (a) is highest in SCBNL it can be said that SCBNL is in the best condition regarding the payments of dividend among the four banks.

Regression Coefficient (b) 's value is greatest in NIBL. This means that one rupees increase in EPS of NIBL will lead to the maximum increase in dividend distribution among the four banks and least value increase in DPS will be seen with increase in one rupees in EPS in SCBNL bank.

4.3.2 Regression Analysis of dividend per share on market price per share

Regression analysis of dividend per share on market price per share will show the relationship between the two variables. Here regression calculation will show the effect of increase or decrease in MPPS on DPS. If positive value of b is obtained then it shows that there is a positive relationship of MPPS with DPS. Regression value 'a' indicates the minimum amount of DPS that is possible. Calculation of regression value of each bank has been done and presented below.

Table 4.3.2 Regression result of dividend per share on market price per share

(DPS = a + bMPS)
(Y = a + bX)

Banks	Sample size	Regression Coefficients	
		a	B
NABIL	5	27.76	0.02
NIBL	5	-0.96	0.02
SCBNL	5	139.83	-0.02
HBL	5	-35.04	0.05

Source: Annual reports of the respective banks

Above table shows the regression results between DPS and MPS. Here it is assumed that DPS is the dependent variable and MPS is the independent variable. The above table shows the possible change in DPS with the change in MPS.

The value of 'a' is 27.76 in NABIL bank this indicates that the DPS value of NABIL will not fall below rupees 27.76. The value of b is .02. This indicates that with the one rupees increase in MPS of the NABIL bank DPS will increase by rupees .02. This shows that NABIL bank is in good position. It will regularly pay dividends and there is positive relationship between market price per share and dividend per share.

Here the second case is of NIBL. The value of a in NIBL is -0.96. This indicates that there may be times when NIBL does not distribute dividend to its shareholders. In the year 2060/61 NIBL did not pay dividend and this regression is also showing that there may me times when NIBL will not pay dividend. The value of is .02. This means there is a positive relationship between MPS and DPS. Increase in MPS will lead to increase in DPS.

In the third case that is of SCBNL, the value of a is 139.83. This means that DPS of SCBNL will not fall below the value of rupees 139.83. From the above calculation it is clear that SCBNL is in the best position to distribute dividend according to the value of a. But, the regression coefficient of b is negative. This means that the increase in MPS of SCBNL has lead to decrease in the dividend distribution in the past. Or we can say that when dividend was distributed the market price has decreased.

In our last bank HBL the value of a is -35.04. This again means that HBL was not able to pay dividends regularly. The value of b is .05 which is a positive value meaning that increase in MPS will lead to increase in DPS.

Above calculations showed that in general increase in MPS leads to increase in DPS.

4.3.3 Regression Analysis of dividend per share on net profit

Regression analysis of dividend per share on net profit will show the relationship between the two variables. Here regression calculation will show the effect of increase or decrease of net profit on DPS. If positive value of b is obtained then it shows that there is a positive relationship of net profit with DPS. Regression value 'a' indicates the

minimum amount of DPS that is possible. Calculation of regression value of each bank has been done and presented below.

Table 4.3.3 Regression result of dividend per share on Net profit.

(DPS = a + bnet profit '000000)
(Y= a + bX)

Banks	Sample size	Regression Coefficients	
		a	B
NABIL	5	22.06	0.09
NIBL	5	29.48	-0.07
SCBNL	5	56.27	0.11
HBL	5	69.99	-0.21

Source: Annual reports of the respective banks

From the data of past five years the above regression results between dividend per share and net profit have been calculated. All the values of regression coefficient a are positive, whereas some values of b are negative. Since both the values a and b are positive in NABIL it is clear that the minimum value of dividend per share in NABIL is 22.06 and the increase in MPS will lead to increase in DPS. This is the same case with SCBNL. But, the minimum value of DPS in SCBNL is greater than NABIL.

In the cases o NIBL and HBL the values of regression coefficient a is positive but the value of regression coefficient b is less than zero. This means that with the increase in net profit the DPS has decreased in both these banks.

So, this gave a mixed result, in two banks increase in net profit lead to increase in DPS and in other two banks increase in net profit lead to decrease in DPS.

4.3.4 Regression Analysis of dividend per share on book value per share

Regression analysis of dividend per share on book value per share will show the relationship between the two variables. Here regression calculation will show the effect of increase or decrease in book value per share on DPS. If positive value of b is obtained then it shows that there is a positive relationship of book value per share with

DPS. Regression value 'a' indicates the minimum amount of DPS that is possible. Calculation of regression value of each bank has been done and presented below.

Table 4.3.4 Regression result of dividend per share on Book Value Per Share

(DPS = a + bBook Value Per Share)

(Y= a + bX)

Banks	Sample size	Regression Coefficients	
		a	b
NABIL	5	8.69	0.17
NIBL	5	-38.63	0.23
SCBNL	5	49.16	0.16
HBL	5	279.53	-0.64

Source: Annual reports of the respective banks

In the above table the result of regression coefficient has been calculated. Regression coefficient 'a' of NABIL is 8.69. This state that DPS of NABIL will not fall below rupees 8.69 and the regression value of 'b' is .17. It means that increase in one rupees in BVPS in NABIL will lead to increase in DPS by rupees .16.

In NIBL Bank the value of 'a' is less than '0' indicating that there are times when dividend was not distributed. The value of 'b' is .23. It indicates that one rupees increase in book value per share will increase rupees .23 in dividend per share. Similarly the value of 'b' of SCBNL is 0.16. This means one rupees increase in book value per share of SCBNL will increase rupees 0.16 DPS.

To the opposite of this the value of 'b' of HBL is -0.64. In HBL, increase in book value per share lead to decrease in DPS.

Thus in general increase in book value per share will lead to increase in DPS.

4.4 Trend analysis

It has been tried to find the trend of DPS in the all the four banks using regression analysis. Following are the result of the calculation.

Table 4.4 Trend of Dividend Per Share

(DPS = a + btime)
(Y= a + bX)

Banks	Sample size	Regression Coefficients	
		a	b
NABIL	5	49.06	0.99
NIBL	5	38.00	-5.00
SCBNL	5	94.00	4.00
HBL	5	58.62	-12.62

Source: Annual reports of the respective banks

In the above table we can see that the value of 'b' is positive in NABIL & SCBNL. This means that DPS in those two banks are in increasing trend and DPS in NIBL and HBL are in decreasing trend. Five years data from the year 2059/60 to 2063/64 has been used to calculate the above regression coefficients.

4.5 Testing of Hypothesis

One of the important applications of statistical inference is 'test of hypothesis'. In testing of hypothesis, an assumption is made about the population parameter. To test whether the assumption or hypothesis is right or not, a sample is selected from the population, sample statistic is obtained, observe the difference between the sample mean and the population hypothesized value, and, test whether the difference is significant or insignificant. Smaller the difference, the sample mean is close to the hypothesized value, and, larger the difference the hypothesized value has low chance to be correct.

Among the various methods of testing hypothesis, here in this study F- test has been used. F-distribution is applied in testing the equality of several population variance. F-distribution is suitable technique, called the 'Analysis of Variance", ANOVA. The basic concept of ANOVA is to test whether the samples have same mean.

First Hypothesis Test (DPS)

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in DPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in DPS of NABIL, NIBL, SCBNL and HBL.

Computation of 'F' test Statistics

Table 4.5.1 Analysis of Variance (One way ANOVA table)

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	23615.17	4-1=3	7871.72	30.28
Within samples	4159.04	19-3=16	259.94	

The calculated value of F is 30.28

The table value of F at 5% level of significance with d.f v1 = 3 and v2 = 16 is 3.24

Decision: Since calculated value of F is greater than the table value at 5% level of significance, H0 is rejected and H1 is accepted i.e. there is significant difference in DPS of NABIL, NIBL, SCBNL and HBL.

Second Hypothesis Test (EPS)

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in EPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in EPS of NABIL, NIBL, SCBNL and HBL.

Computation of 'F' test Statistics

Table 4.5.2 Analysis of Variance (One way ANOVA table)

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	23332.57	4-1=3	7777.52	31.91
Within samples	3899.22	19-3=16	243.70	

The calculated value of F is 31.91

The table value of F at 5% level of significance with d.f. v1 = 3 and v2 = 16 is 3.24

Decision: Since calculated value of F is greater than the table value at 5% level of significance, H0 is rejected and H1 is accepted i.e. there is significant difference in EPS of NABIL, NIBL, SCBNL and HBL.

Third Hypothesis Test (DPR)

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in DPR of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in DPR of NABIL, NIBL, SCBNL and HBL.

Computation of 'F' test Statistics

Table 4.5.3 Analysis of Variance (One way ANOVA table)

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	0.79042	4-1=3	0.26	4.07
Within samples	1.03	19-3=16	0.06	

The calculated value of F is 4.07

The table value of F at 5% level of significance with d.f. v1 = 3 and v2 = 16 is 3.24

Decision: Since calculated value of F is greater than the table value at 5% level of significance, H0 is rejected and H1 is accepted i.e. there is significant difference in DPR of NABIL, NIBL, SCBNL and HBL.

Forth Hypothesis Test (MVPS)

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in MVPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in MVPS of NABIL, NIBL, SCBNL and HBL.

Computation of 'F' test Statistics

Table 4.5.4 Analysis of Variance (One way ANOVA table)

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	2089342.55	4-1=3	696447.52	6.56
Within samples	1699830.40	19-3=16	106239.40	

The calculated value of F is 6.56

The table value of F at 5% level of significance with d.f. v1 = 3 and v2 = 16 is 3.24

Decision: Since calculated value of F is greater than the table value at 5% level of significance, H0 is rejected and H1 is accepted i.e. there is significant difference in MVPS of NABIL, NIBL, SCBNL and HBL.

Fifth Hypothesis Test (BVPS)

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in BVPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in BVPS of NABIL, NIBL, SCBNL and HBL.

Computation of 'F' test Statistics

Table 4.5.5 Analysis of Variance (One way ANOVA table)

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	78368.35	4-1=3	26122.78	18.61
Within samples	22463.12	19-3=16	1403.95	

The calculated value of F is 18.60

The table value of F at 5% level of significance with d.f. v1 = 3 and v2 = 16 is 3.24

Decision: Since calculated value of F is greater than the table value at 5% level of significance, H0 is rejected and H1 is accepted i.e. there is significant difference in BVPS of NABIL, NIBL, SCBNL and HBL.

4.6 Findings

Major findings obtained from the data analysis are stated below:

- There is positive correlation between dividend and share traded amount and number of transaction of shares. So it is clear that there is significant role of dividend distribution while making investment decision.
- Dividend distribution procedure is about the same in all the banks.
- It was not apparent as to what were the exact factors that effected dividend decision. Thought it was very clear that there are various factors that effect dividend decision.
- Trend of dividend distribution was not the same in all the four banks. NABIL distributed least in its third year. Dividend distribution was in increasing trend in the last two years. NIBL and HBL dividend is in decreasing trend. SCBNL had stable dividend in the first three years and now is in increasing trend.
- There are no clear rules and regulations regarding dividend policy in our country.
- Dividend is not regularly distributed in banks
- Amount of dividend distributed also varies from one bank to another and from one year to another. There is no consistency. The most consistent bank among the four selected banks was SCBNL. Second from the consistency point of view is NABIL. NIBL and HBL were not consistent in paying dividends.

- SCBNL has the highest average EPS ie Rs.135.30, NABIL has the second highest EPS Rs. 75.11 and HBL and NIBL has Rs. 67.08 and 42.34 respectively.
- In the five consecutive years NIBL has the most consistent EPS and HBL has the most inconsistent EPS.
- In the history of last five consecutive years, on an average SCBNL distributed the highest amount of share to its shareholders i.e. Rs.106 and HBL distributed the least amount of dividend i.e. Rs. 20.76. In those five years both NIBL and HBL did not distribute dividend in second and fifth year respectively.
- On an average SCNBL has the highest dividend payout ratio is. 0.79 and HBL has the least payout ratio i.e. 0.27. NABIL has the second highest payout ratio 0.70 and NIBL has the third highest i.e. 0.52. The bank with the most consistent payout ratio is SCBNL and the least consistent is NIBL. In the year 2060/61 NABIL's payout ratio is 1.01. In this year NABIL had EPS of Rs. 59.26 but it distributed Rs. 60.11 as dividend including bonus. Cash dividend was Rs.40.
- NIBL's average price earning ratio is highest i.e. 24.33 and SCBNL's price earning ratio is lowest i.e. 13.67. HBL's price earning ratio is the most consistent one and NABIL's price earning ratio is the most inconsistent one.
- On an average SCBNL has the highest market price per share i.e. Rs.1817.80 and NIBL has the lowest market price per share i.e. Rs. 1009.2. Bank with second highest market price is HBL with Rs. 1175.20 and third is NABIL with Rs. 1068.00. Bank with the most consistent market price is SCBNL and most inconsistent market price is HBL.
- Average book value per share is highest in HBL. Second third and forth in the rank lies SCBNL, NIBL and NABIL respectively. Bank with most consistent book value per share is HBL and least consistent is SCBNL
- SCBNL has the highest ratio of market price per share to book value per share i.e. 5.19 in an average and lowest ratio is of HBL i.e. 2.97 times. NIBL has the most consistent ratio of MPPS to BVPS and NABIL has the least consistent ratio.
- The ratio of dividend per share and market value per share is consistent in all the four banks.

- Correlation between DPS and share traded quantity is slightly negative. This means increase in DPS slightly decrease the quantity of share traded
- There is slightly positive relation between DPS and share traded amount. Increase in DPS increase the traded amount.
- There is positive relation between DPS and number of transaction of shares.
- DPS has a positive relationship with EPS in all the four banks. Hence it can be concluded that increase in EPS leads to increase in DPS.
- DPS has positive correlation with NP in NABIL & SCBNL but has negative correlation with in NIBL & HBL. So, it is not clear whether increase in NP will lead to increase or decrease in DPS.
- MPPS has a positive relation with DPS in all the banks except SCBNL. So it may be said that increase in DPS leads to increase in MPPS or increase in MPPS leads to increase in DPS.
- DPS has a positive relationship with net worth in all the banks except HBL. Hence it may be assumed that increase in net worth leads to increase in DPS and decrease in net worth will lead to decrease in DPS.
- There is no consistency in the correlation among EPS, NP, MPPS and Nw.
- One rupee increase in EPS will lead to an increase in Rs.0.49, 1.012, 0.479 and 0.82 increase in DPS of NABIL, NIBL, SCBNL and HBL respectively
- One rupees increase in MPPS will lead to increase in Rs.0.02, 0.02, -0.02 and 0.05 increase in DPS of NABIL, NIBL, SCBNL and HBL respectively
- One rupees increase in BVPS will lead to increase in Rs.0.17,0.23,0.16 and -0.64 increase in DPS of NABIL, NIBL, SCBNL and HBL respectively.
- It seems that NABIL is in the decreasing dividend distribution trend. It is expected to distribute Rs. 54.99, Rs. 8, Rs.118 and Rs. 10.17 as dividend by NABIL, NIBL, SCBNL and HBL from the trend analysis.
- From the testing of hypothesis it has been proven that there is significant difference in DPS, EPS, DPR, MPPS and BVPS.

Chapter V
Summary, Conclusion and Recommendations

5.1 Summary

Dividend refers to that portion of firms net earning which is paid out to the shareholders. Dividend is a comprehensive signal of management's interpretation of the 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 companies and Nepalese investors who have poured their fund in there.

An effective way to attract new investors to invest in shares is paying dividend. Due to division of earnings of a company between dividend payout and retention of earning, its effect on market price of shares is crucial question. Thus, a wise policy should be maintained between shareholders interest and corporate growth from internally generated funds. The funds can't be used in case of lack of investment opportunities. Dividend payments to shareholders is taken as best in such a condition, because shareholders have investment opportunities to invest elsewhere. In the changed context of encouraging secondary market, it is time to study influences of other factors on dividend and implications of dividend on market price per shares. The study has tried to cover some such factors. However, it is not enough due to some limitations.

In this study four topmost banks have been selected so that implications of dividend can be studied. It can be clearly seen that in Nepalese companies, there is a vague practice on distribution of dividend. Shareholders have high expectation that market prices of shares will be significantly higher than net worth which is true in these sample banks. Instability of dividend and inconsistent payout ratio is the most applied phenomenon of Nepalese dividend distribution practices.

This study consists of five chapters. The first chapter gives the idea of what the study is all about. Second chapter studies similar types of studies carried out in the past. Third chapter gives the idea on the method of carrying out the study, in the fourth chapter main study is being done by using financial indicators and statistical tools and in this last chapter major findings, summary and conclusion are given.

5.2 Conclusion

The rules and regulations that bind the companies to pay dividend is lacking. There is no specific guideline in Company Act 2053, Commercial Bank Act 2031 and other regulating acts regarding dividend payment. This has caused inconsistency in dividend payment. There is a need of specific rules and regulation regarding dividend distribution. Out of the four selected banks of this study, only NABIL and SCBNL have paid regular dividend whereas NIBL and HBL have not paid dividend regularly.

SCBNL is the bank that has paid dividend consistently. In respect to consistency NABIL is the second consistent bank that paid dividend. HBL has the most fluctuating dividend. There seems instability and inconsistency in dividend payment. The average DPR of banks range from 27 to 79. HBL faced the greatest fluctuation in DPR. Dividend payout ratio of HBL does not show any stability. So, this situation indicates that HBL do not have strategic dividend policy.

5.3 Recommendations

- Considering the major findings identified in course of this thesis, some recommendations are presented. It is hoped that this recommendation will certainly helpful to overcome existing issues in this field.
- Fluctuation in dividend payments may create uncertainty among stockholders. So, it is recommended that banks should maintain constant dividend payout policy to satisfy stockholders and also to build good image in stock market. Banks should have clear basis of dividend distribution.

- Regular dividends were not distributed in all the banks. A mechanism of profit sharing with shareholders, dividend distribution, should be clear and dividend should be distributed on a regular basis.
- Trust from shareholders can be gained if dividends are distributed regularly. Hence people will be willing to invest in new ventures.
- The analysis of dividend payout ratio of NIBL and HBL shows high degree of fluctuation. This sort of imbalance causes serious inconvenience and uncertainty among shareholders as well as many other sectors of the company. It is recommended that NIBL should follow constant dividend payout ratio policy.
- Banks should have long term vision regarding earnings and dividend per share which helps them to cope with challenging competitive situation of present world. They should define their vision clearly considering their future plans, expansion in business, future economy of the country. Considering various internal and external factors, companies should choose whether to adopt stable dividend policy, constant payout ratio or low regular plus extras or adopting dividend as residual dividend policy.
- There is a necessity to establish an organization, recognized by the government that carries out activities to promote and protect shareholders/investors interest. The activities of Nepal Stock exchange Ltd and Security Board of Nepal should be made wide and these organizations should be revitalized equipping them with competent manpower and other physical facilities.
- Banks are advised to have target rate of earning and target payout ratio that will help companies to build good image in stock market and investors will be on ease while making investment decision.
- Banks can clearly define their dividend policy according to discussion in AGM among shareholders in democratic manner.
- Shareholders should be given an option to choose between stock dividend and cash dividend instead of declaring stock or cash dividend arbitrarily. For this, dividend declaration should be proposed to the annual general meeting of shareholders for approval.

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APPENDIX 1

Calculation of Regression Analysis of EPS and DPS

NABIL

X=EPS Y=DPS

Year	Y	X	XY	X^2
2059/60	55	83.79	4608.45	7020.76
2060/61	60.11	59.26	3562.1186	3511.75
2061/62	30	55.25	1657.5	3052.56
2062/63	50	84.66	4233	7167.32
2063/64	65	92.61	6019.65	8576.61
	∑Y=260.11	∑x=375.57	∑xy=20080.72	$\sum x^2$=29329

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get
260.11=5a+35.57b
20080.72=375.57a+29329b

Solving the following equation we get
a=15.56
b=0.49

NIBL

X=EPS Y=DPS

Year	Y	X	XY	X2
2059/60	50	53.68	2684	2881.54
2060/61	0	33.18	0	1100.91
2061/62	30	33.59	1007.7	1128.29
2062/63	20	39.56	791.2	1564.99
2063/64	15	51.7	775.5	2672.89
	∑Y=115	∑x=211.71	∑xy=5258.4	$\sum x^2$=9348.63

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get

115=5a+211.71b
5258.4=211.71a+9348.63b

Solving the following equation we get
a = -19.86
b = 1.01

SCBNL

X=EPS Y=DPS

SCBNL	X=EPS	y=DPS		
Year	Y	X	XY	X2
2059/60	100	115.62	11562	13367.98
2060/61	100	126.88	12688	16098.53
2061/62	100	141.13	14113	19917.68
2062/63	120	149.3	17916	22290.49
2063/64	110	143.55	15790.5	20606.60

$\sum Y=530$ $\sum x=676.48$ $\sum xy=72069.5$ $\sum x^2=92281.29$

Using regression formula
$\sum Y= na +\sum xb$
$\sum XY= \sum Xa + \sum X^2b$

We get
530=5a+676.48b
72069.50=676.48a+92281.29b

Solving the following equation we get
a = 42.13
b = 0.48

HBL

X=EPS Y=DPS

Year	Y	X	XY	X2
2059/60	50	83.08	4154	6902.29
2060/61	27.5	93.57	2573.175	8755.34
2061/62	25	60.26	1506.5	3631.27
2062/63	1.32	49.45	65.274	2445.30
2063/64	0	49.05	0	2405.90

$\sum Y=103.82$ $\sum x=335.41$ $\sum xy=8298.95$ $\sum x^2=24140.10$

Using regression formula
$\sum Y= na +\sum xb$

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

We get
103.82=5a+335.41b
8298.95=335.41a+24140.10b

Solving the following equation we get
a = 33.82
b = 0.81

Calculation of Regression Analysis of MPS and DPS

NABIL

X=MPS Y=DPS

Year	Y	X	XY	X2
2059/60	55	1400	77000	1960000.00
2060/61	60.11	1500	90165	2250000.00
2061/62	30	700	21000	490000.00
2062/63	50	740	37000	547600.00
2063/64	65	1000	65000	1000000.00
	$\sum Y$=260.11	$\sum x$=5340	$\sum xy$=290165	$\sum x^2$=6247600

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get a= 27.76 b= 0.02

NIBL

X=MPS Y=DPS

NIBL	X=MPS	y=DPS		
Year	Y	X	XY	X2
2059/60	50	1401	70050	1962801.00
2060/61	0	1150	0	1322500.00
2061/62	30	760	22800	577600.00
2062/63	20	795	15900	632025.00
2063/64	15	940	14100	883600.00
	$\sum Y$=115	$\sum x$=5046	$\sum xy$=122850	$\sum x^2$=5378526

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get a= -0.96 b=0.02

SCBNL

X=MPS Y=DPS

SCBNL	X=MPS	y=DPS		
Year	Y	X	XY	X2
2059/60	100	1985	198500	3940225.00
2060/61	100	2144	214400	4596736.00
2061/62	100	1575	157500	2480625.00
2062/63	120	1640	196800	2689600.00
2063/64	110	1745	191950	3045025.00
	∑Y=530	∑x=9089	∑xy=959150	$\sum x^2$=16752211

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get a= 139.83 b=-0.02

HBL
X=MPS Y=DPS

HBL	X=MPS	y=DPS		
Year	Y	X	XY	X2
2059/60	50	1700	85000	2890000.00
2060/61	27.5	1500	41250	2250000.00
2061/62	25	1000	25000	1000000.00
2062/63	1.32	836	1103.5	698896.00
2063/64	0	840	0	705600.00
	∑Y=103.82	∑x=5876	∑xy=152354	$\sum x^2$=544496

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$

We get a= -35.04 b=0.05

Calculation of Regression Analysis of MPS and DPS (X=Net Profit in '000000 Y=DPS)

NABIL

Year	Y	X	XY	X2
2059/60	55	322	17710	103684.00
2060/61	60.11	276	16590.36	76176.00
2061/62	30	252	7560	63504.00
2062/63	50	416	20800	173056.00
2063/64	65	455	29575	207025.00

$\sum Y=260.11 \sum x=1721$ $\sum xy=92235.36$ $\sum x^2=623445.00$

Using regression formula
$\sum Y= na +\sum xb$
$\sum XY= \sum Xa + \sum X^2b$ We get a=22.06 b=0.09

NIBL

Year	Y	X	XY	X2
2059/60	50	72.6	3630	5270.76
2060/61	0	56.4	0	3180.96
2061/62	30	57.1	1713	3260.41
2062/63	20	116.8	2336	13642.24
2063/64	15	152.6	2289	23286.76
	$\sum Y=115$	$\sum x=455.5$	$\sum xy=9968$	$\sum x^2=48641.13$

Using regression formula
$\sum Y= na +\sum xb$
$\sum XY= \sum Xa + \sum X^2b$ We get a=29.48 b=-0.07

SCBNL

Year	Y	X	XY	X2
2059/60	100	393	39300	154449.00
2060/61	100	431	43100	185761.00
2061/62	100	479	47900	229441.00
2062/63	120	507	60840	257049.00
2063/64	110	538	59180	289444.00
	530	2348	250320	1116144.00
	$\sum Y=530$	$\sum x=2648$	$\sum xy=250320$	$\sum x^2=1116144$

Using regression formula
$\sum Y= na +\sum xb$
$\sum XY= \sum Xa + \sum X^2b$ We get a=56.27 b=0.11

HBL

Year	Y	X	XY	X2
2059/60	50	199.38	9969	39752.38
2060/61	27.5	277.039	7618.573	76750.61
2061/62	25	235.023	5875.575	55235.81
2062/63	1.32	212.129	280.0103	44998.71
2063/64	0	263.053	0	69196.88
	$\sum Y=103.82$	$\sum x=1186.62$	$\sum xy=23743.16$	$\sum x^2=285934.40$

Using regression formula
$\sum Y= na +\sum xb$

$\sum XY = \sum Xa + \sum X^2 b$ We get a= 69.99 b=-0.21

Calculation of Regression Analysis of MPS and DPS (X=Book value per share '000000 Y=DPS)

NABIL

Year	Y	X	XY	X2
2059/60	55	251	13805	63001.00
2060/61	60.11	216	12983.76	46656.00
2061/62	30	233	6990	54289.00
2062/63	50	267	13350	71289.00
2063/64	65	301	19565	90601.00
	$\sum Y$=260.11	$\sum x$=1268	$\sum xy$=66693.76	$\sum x^2$=325836.00

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$ We get a=8.69 b=0.17

NIBL

Year	Y	X	XY	X2
2059/60	50	303.09	15154.5	91863.55
2060/61	0	275.96	0	76153.92
2061/62	30	307.95	9238.5	94833.20
2062/63	20	216.24	4324.8	46759.74
2063/64	15	246.89	3703.35	60954.67
	$\sum Y$=115	$\sum x$=1350.13	$\sum xy$=32421.15	$\sum x^2$=370565.08

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$ We get a=-38.63 b=0.23

SCBNL

SCBNL	X=Book value per share	y=DPS		
Year	Y	X	XY	X2
2059/60	100	298.88	29888	89329.25
2060/61	100	327.5	32750	107256.25
2061/62	100	363.86	36386	132394.10
2062/63	120	403.15	48378	162529.92
2063/64	110	399.25	43917.5	159400.56
	$\sum Y$=530	$\sum x$=1792.64	$\sum xy$=191319.5	$\sum x^2$=650910.09

Using regression formula
$\sum Y = na + \sum xb$
$\sum XY = \sum Xa + \sum X^2 b$ We get a=49.16 b=0.16

HBL

HBL	X=Book value per share	y=DPS		
Year	Y	X	XY	X2
2059/60	50	362.7	18135	131551.29
2060/61	27.5	399.42	10984.05	159536.34
2061/62	25	393.34	9833.5	154716.36
2062/63	1.32	444.26	586.4232	197366.95
2063/64	0	427.4	0	182670.76
	∑Y=106.82	∑x=2027.12	∑xy=39538.97	$\sum x^2$=825841.69

Using regression formula

$\sum Y = na + \sum xb$

$\sum XY = \sum Xa + \sum X^2 b$ We get a=279.53 b= -0.064

Calculation of Regression Analysis of Time (years) and DPS (X=year Y=DPS)

NABIL

Year	Y	X	XY	X2
2059/60	55	1	55	1.00
2060/61	60.11	2	120.22	4.00
2061/62	30	3	90	9.00
2062/63	50	4	200	16.00
2063/64	65	5	325	25.00
	∑Y=260.11	∑x=15	∑xy=790.22	$\sum x^2$=55

Using regression formula

$\sum Y = na + \sum xb$

$\sum XY = \sum Xa + \sum X^2 b$ We get a=49.06 b=0.99

NIBL

Year	Y	X	XY	X2
2059/60	50	1	50	1.00
2060/61	0	2	0	4.00
2061/62	30	3	90	9.00
2062/63	20	4	80	16.00
2063/64	15	5	75	25.00
	∑Y=115	∑x=15	∑xy=295	$\sum x^2$=55

Using regression formula

$\sum Y = na + \sum xb$

$\sum XY = \sum Xa + \sum X^2 b$ We get a=38 b= -5

SCBNL

Year	Y	X	XY	X2
2059/60	100	1	100	1.00
2060/61	100	2	200	4.00
2061/62	100	3	300	9.00
2062/63	120	4	480	16.00
2063/64	110	5	550	25.00
	∑Y=530	∑x=15	∑xy=1630	$\sum x^2$=55

Using regression formula

∑Y= na +∑xb

$\sum XY = \sum Xa + \sum X^2 b$ We get a=94 b= 4

HBL

HBL	X=Time	y=DPS		
Year	Y	X	XY	X2
2059/60	50	1	50	1.00
2060/61	27.5	2	55	4.00
2061/62	25	3	75	9.00
2062/63	1.32	4	5.28	16.00
2063/64	0	5	0	25.00
	∑Y=103.82	∑x=15	∑xy=185.28	$\sum x^2$=55

Using regression formula

∑Y= na +∑xb

$\sum XY = \sum Xa + \sum X^2 b$ We get a=58.62 b= -12.62

Banks	Sample size	Regression Coefficients	
		a	b
NABIL	5	49.06	0.99
NIBL	5	38.00	-5.00
SCBNL	5	94.00	4.00
HBL	5	58.62	-12.62

APPENDIX 2

Calculation of 'F' test

DPS

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in DPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in DPS of NABIL, NIBL, SCBNL and HBL.

Here A=DPS of NABIL, B=DPS of NIBL, C=DPS of SCBNL, D=DPS of HBL and

a= mean of A, b=mean of b, c= mean of C, d = mean of D.

A	$(A-a)^2$	B	$(B-b)^2$	C	$(C-c)^2$	D	$(D-d)^2$
55	8.868484	50	729	100	36	50	854.74
60.11	65.415744	0	529	100	36	27.5	45.37
30	484.96848	30	49	100	36	25	17.94
50	4.088484	20	9	120	196	1.32	378.07
65	168.42848	15	64	110	16	0	431.14
$\sum A=260.11$	$\sum (A-a)^2=731.76$	$\sum B=115$	$\sum (A-a)^2=1380$	$\sum C=530$	$\sum (C-c)^2=320$	$\sum D=103.82$	$\sum (D-d)^2=1727.27$
a=52.02		b=23		c=106		d=20.764	

Grand total (GT)	1008.93
Grand mean (GM)	50.45
Number of observation (n)	5

Variance between samples $SSB = n(a-GM)^2 + n(b-GM)^2 + n(c-GM)^2 + n(d-GM)^2$

Variance within samples: $SSW = \sum (A-a)^2 + \sum (A-a)^2 + \sum (C-c)^2 + \sum (D-d)^2$

SSB	23615.17
SSW	4159.04

One Way ANOVA table

Source of variation	d.f.	Sum of squares	Mean sum of squares	F
Between samples	4-1=3	23615.174	7871.7246	
Within samples	19-3=16	4159.04	259.94023	30.282826

The table value of F at 5% level of significance with v1=3 and v2=6 is 3.24
The calculated value of F is 30.28

EPS

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in EPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in EPS of NABIL, NIBL, SCBNL and HBL.

Here A=EPS of NABIL, B=EPS of NIBL, C=EPS of SCBNL, D=EPS of HBL and

a= mean of A, b=mean of b, c= mean of C, d = mean of D

A	$(A-a)^2$	B	$(B-b)^2$	C	$(C-c)^2$	D	$(D-d)^2$
83.79	75.272976	53.68	128.55024	115.62	387.145	83.08	255.94
59.26	251.34932	33.18	83.942244	126.88	70.82906	93.57	701.61
55.25	394.5785	33.59	76.597504	141.13	34.03556	60.26	46.54
84.66	91.126116	39.56	7.739524	149.3	196.112	49.45	310.89
92.61	306.11002	51.7	87.572164	143.55	68.12852	49.05	325.15
$\sum A=$	$\sum (A-a)^2=$	$\sum B=$	$\sum (A-a)^2=$	$\sum C=$	$\sum (C-c)^2=$	$\sum D=$	$\sum (D-d)^2=$
375.57	1118.4369	211.71	384.40168	676.48	756.2501	335.41	1640.13
a = 75.114		b= 42.342		c=135.296		d=67.082	

Grand total (GT)	1599.17
Grand mean (GM)	79.96
Number of observation (n)	5

Variance between samples $SSB = n(a-GM)^2 + n(b-GM)^2 + n(c-GM)^2 + n(d-GM)^2$

Variance within samples: $SSW = \sum (A-a)^2 + \sum (A-a)^2 + \sum (C-c)^2 + \sum (D-d)^2$

SSB	23332.57
SSW	3899.22

One Way ANOVA table

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	23332.57	4-1=3	7777.52	31.91
Within samples	3899.22	19-3=16	243.70	

Table value of F at 5% level of significance with v1=3 and v2 = 16 is 3.24
The calculated value of Fis 31.91

DPR

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in DPR of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in DPR of NABIL, NIBL, SCBNL and HBL.

Here A=DPR of NABIL, B=DPR of NIBL, C=DPR of SCBNL, D=DPR of HBL and

a= mean of A, b=mean of b, c= mean of C, d = mean of D.

A	$(A-a)^2$	B	$(B-b)^2$	C	$(C-c)^2$	D	$(D-d)^2$
0.66	0.0016	0.93	0.164836	0.86	0.005476	0.6	0.11156
1.01	0.0961	0	0.274576	0.79	0.000016	0.29	0.00058
0.54	0.0256	0.89	0.133956	0.71	0.005776	0.41	0.02074
0.59	0.0121	0.51	0.000196	0.8	0.000196	0.03	0.0557
0.7	0	0.29	0.054756	0.77	0.000256	0	0.07076
$\sum A=$	$\sum (A-a)^2=$	$\sum B=$	$\sum (A-a)^2=$	$\sum C=$	$\sum (C-c)^2=$	$\sum D=$	$\sum (D-d)^2=$
3.5	0.1354	2.62	0.62832	3.93	0.01172	1.33	0.25932
a = 0.7		b=0.524		c=0.786		d=0.266	

Grand total (GT) 11.38
Grand mean (GM) 0.57
Number of observation (n) 5

Variance between samples $SSB = n(a-GM)^2 + n(b-GM)^2 + n(c-GM)^2 + n(d-GM)^2$

Variance within samples: $SSW = \sum (A-a)^2 + \sum (A-a)^2 + \sum (C-c)^2 + \sum (D-d)^2$

SSB 0.79
SSW 1.03

One Way ANOVA table

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	0.79042	4-1=3	0.2634733	
Within samples	1.03	19-3=16	0.0646725	4.073962

Table value of F at 5% level of significance with v1=3 and v2 = 16 is 3.24
Calculated value of F is 4.07

MPPS

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in MPPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in MPPS of NABIL, NIBL, SCBNL and HBL.

Here A=MPPS of NABIL, B=MPPS of NIBL, C=MPPS of SCBNL, D=MPPS of HBL and

a= mean of A, b=mean of b, c= mean of C, d = mean of D.

A	$(A-a)^2$	B	$(B-b)^2$	C	$(C-c)^2$	D	$(D-d)^2$
1400	110224	1401	153507.2	1985	27955.84	1700	275415
1500	186624	1150	19824.64	2144	106406.44	1500	105495
700	135424	760	62100.64	1575	58951.84	1000	30695
740	107584	795	45881.64	1640	31612.84	836	115057
1000	4624	940	4788.64	1745	5299.84	840	112359

$\sum A=$	$\sum (A-a)^2=$	$\sum B=$	$\sum (A-a)^2=$	$\sum C=$	$\sum (C-c)^2=$	$\sum D=$	$\sum (D-d)^2=$
5340	544480	5046	286102.8	9089	230226.8	5876	639021
a =1068		b=1009.2		c=1817.8		d=1175.2	

Grand total (GT) 25351
Grand mean (GM) 1267.55
Number of observation (n) 5

Variance between samples SSB = $n(a-GM)^2+ n(b-GM)^2 + n(c-GM)^2 + n(d-GM)^2$

Variance within samples: SSW = $\sum (A-a)^2 + \sum (A-a)^2 + \sum (C-c)^2 + \sum (D-d)^2$

SSB 2089342.55
SSW 1699830.40

One Way ANOVA table

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	2089342.55	4-1=3	696447.52	
Within samples	1699830.40	19-3=16	106239.40	6.56

Table value of F at 5% level of significance with v1=3 and v2 = 16 is 3.24
Calculated value of F is 6.56

BVPS

Null Hypothesis (H0): $\mu 1 = \mu 2 = \mu 3 = \mu 4$

i.e. There is no significant difference in BVPS of NABIL, NIBL, SCBNL and HBL.

Alternative Hypothesis (H1): $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

i.e. There is significant difference in MPPS of NABIL, NIBL, SCBNL and HBL.

Here A=BVPS of NABIL, B=BVPS of NIBL, C=BVPS of SCBNL, D=BVPS of HBL and

a= mean of A, b=mean of b, c= mean of C, d = mean of D.

A	$(A-a)^2$	B	$(B-b)^2$	C	$(C-c)^2$	D	$(D-d)^2$
251	6.76	303.09	1093.228	298.88	3557.8839	362.7	1825.34
216	1413.76	275.96	35.21236	327.5	962.736784	399.42	36.048
233	424.36	307.95	1438.23	363.86	28.430224	393.34	146.023
267	179.56	216.24	2892.934	403.15	1991.12288	444.26	1508.23
301	2246.76	246.89	535.2745	399.25	1658.28128	427.4	482.945
$\sum A=$	$\sum (A-a)^2=$	$\sum B=$	$\sum (A-a)^2=$	$\sum C=$	$\sum (C-c)^2=$	$\sum D=$	$\sum (D-d)^2=$
1268	4271.2	1350.13	5994.879	1792.64	8198.45508	2027.12	3998.59
a=253.6		b=270.026		c=358.528		d=405.424	

Grand total (GT) 6437.89

Grand mean (GM) 321.89
Number of observation (n) 5

Variance between samples SSB = $n(a - GM)^2 + n(b - GM)^2 + n(c - GM)^2 + n(d - GM)^2$

Variance within samples: SSW = $\sum (A - a)^2 + \sum (A - a)^2 + \sum (C - c)^2 + \sum (D - d)^2$

SSB 78368.35
SSW 22463.12

One Way ANOVA table

Source of variation	Sum of squares	d.f.	Mean sum of squares	F
Between samples	78368.35	4-1=3	26122.78	
Within samples	22463.12	19-3=16	1403.95	18.61

Table value of F at 5% level of significance with v1=3 and v2 = 16 is 3.24
Calculated value of F is 18.61