CHAPTER- I

INTRODUCTION

1.1 General Background

Nepal is a developing country. There is not a long history of financial institution's development progress. In Nepal. After the restoration of democracy, by the government's liberal policy, many financial institutions are incorporated in that period. Due to ongoing development progress many financial institution are suffering from various problem of policies decision. Dividend decision is one of the important decision of the firm .A business firm earn profit .The profit is divided in to two forms. One is retained earning and another is dividend. The policy of the company on the dividend of it earning or net profit distributed to shareholders or and reinvested in the firm is called dividend policy. Most of the shareholders of Nepali corporation are unknown about the dividend. There are various factor affect the policy decision of the firm. The company liquidity performance is major indicator of paying dividend. Normally, dividend is declared by the board of director of the company and approved by the company general assembly .Cash dividend is the major aspects of forms dividend in the Nepalese business organization.

Modigliani and Miller claimed that "Corporate dividend practice was a moral details in their contextual their analysis the air has been filled with the debate on the importance of dividend'' Dividend policy is a fundamental aspects of the company policy .The portion of dividend is determination of the future market price per share .In the cash dividend distribution level is high the cash outflow also high cause the decreases the market price of stock. There are various factor affect the policy making of dividend .The major factors that are legal restriction control shareholder expectations ,tax position ,stock price, profit ,need to repay debts etc. Sometime these variables play significant role but sometime they are disaster to policy maker .Normally, internal factor can be controlled but the external one is hard for measuring and controlling.

There is reciprocal relationship between retained earning and dividend .If retained is made more by the company less will be dividend to the shareholders, if dividend is declared more less will be retained earning. There is another controversial aspect of distribution of paying dividend Cash dividend or stock dividend which is superior? This is a great question. Many Nepalese institution are followed the cash dividend .Normally ,the common stock is increased after issue of stock dividend and the market price of share is decreased after issued of stock dividend or cash dividend.

Banks and insurance companies are played vital role in the economic development of the country. They are important for mobilizing the resources and to increase the per capita income of the people .So they also help on increasing the Gross Domestic Production (GDP). Commercial banks function is many ways such as accepting deposit, providing loan facilities, providing interest in the formulation of capital performing agency. The main functions of banks are creating the credit of the nations .Another crucial financial institution is the insurance company. The main functions of insurance company are also mobilizing the resources. Now more than thirteen insurance companies play the significant role for country's economic development. There are various covering area at insurance by insurance companies i.e. fire and allied, marine, life-insurance, personal accident etc. The life insurance is one of the most famous forms of insurance in the Nepalese context.

Banks and insurance companies are developing and operating with the joint-venture started to successfully after establishing of democracy. Now more than 17 th commercial banks are incorporated and more than 13 th insurance companies pose significantly in different part of Nepal. The commercial Banks and insurance companies are incorporated under the commercial Bank Act 2031, Nepal Rastra Bank Act 2058, The Companies Act 2053, Contract Act - 2056, Insurance Company Act and Act of National Beema Committee.

1.2 A short introduction of Sample Institutions.

To avoid the various difficulties in terms of dividend decision, we have selected the Nepalese commercial banks and insurance companies, which are growing with ongoing progressive condition. Nepal Investment Bank, Standard Chartered Bank (Nepal), Nabil Bank are sample commercial banks and Premier insurance company(Nepal),Everest insurance company and Nepal insurance company are sample insurance companies for research purpose. Nepal investment Bank ,previously Nepal Indosez Bank Ltd was established in 1986 as joint venture between Nepalese and French partners. Nepal Investbank Bank is standing with world class services through the blending of state of the art and visionary management with committed ethical standard ,professional integrity ,corporate governance and regularity compliance .The bank's capitalization condition is formed by a group of company 50%, Rastriya Banijya Bank 15%, Rastriya Beema Sastan 15% and general public hold 20%.Another major owner of bank, a group of Standard Chartered ,is Known as Standard Chartered Bank(Nepal) Ltd has been operating in Nepal since 1987.The Standard Chartered group who has 75% ownership in company with 25% shares owned by Nepalese banks .With the growing history of banks ,it has lunched the progressive of ATM ,e-banking and network banking .It has established 15 branch with head office in different part of Nepal and can build 16 point of ATM and 350 local staffs. We can say that Standard Charted bank (Nepal) ltd is in a position to serve its customer through a large domestic network. Nabil Bank Ltd, author of Nepal industrial development corporation Ltd ,was established in Nepal in July 1984 with collaboration of Emirates Banks and NABIL (Nepal Arab Bank) Dubai bank Ltd. The Shareholding position of bank's is mixed of NB international Ltd Ireland stake 50%,local financial institution of Nepal hold 20% and remaining Capital structure is taken by general public. The head office is linked in Nabil House, Kamaladi Kathmandu. Kantipath, Biratnagar, Bhairahawa, Tripuraswor, Lalitpur, Nepaljung, with 18 branch are successfully operating in different part of Nepal.

The insurance companies in Nepal are a significant financial phenomenon. Premier insurance company(Nepal) Ltd ,incorporated on 10,th may 1994,has emerged as a renewed general insurance company of second generation. The insurance and reinsurance business owes itself to the determination of its promoters. The Company enlarged its office in the four regional area. Birjung, Narayangard, Pokhara and Biratnagar office are coming to all Nepalese prospective of insurance indeed .Providing the facilities of insurance and reinsurance is the main function of its insurance company .The Everest insurance company Ltd is a leading insurance company in Nepal ,was established in July 1994 as a public limited company. It is a non life insurance company has been ensure on world class quality service. The strength of company is its management committee background, dynamic staffs of 60 members and countrywide network of 300 agents. With the ambition of insurance company can winning to trust from its more than 20000 clients and is at present one of the leading insurance company in Nepal. The another insurance company ,Nepal insurance company Ltd ,Which is also a non –life insurance company has successfully operation in Nepal since 1947 sep and became a joint –Venture with general public on Aswin 8, 2004. Nepal Bank Limited (NBL), who is a major stakeholder stake the 51% capital structure. Nepal insurance company has lunched the area of insurance i.e. Fire, Allied, Marine, Aviation, Motor, Banker's identity, Household, Personal accident. Nepal insurance company is standing with nine branch office in different part of Nepal, has a team of highly professionals and qualify member of with more than 33 years experience.

Summary of the sample companies

SN	Name of institutions	Date of establishment	Head office
	Banks		
1	Nepal Investment Bank Ltd (NIBL)	1986(April, 2002)	Darbarmarg, Kathmandu
2	Standard Chartered Bank (Nepal) Ltd (SCBNL)	1987	New Baneswor, Kathmandu
3	Nabil Bank Ltd (NABIL)	July 12,1984	Nabil House, Kamaladi
	Insurance Companies		
1	Premier insurance Company Ltd (PICL)	12'th may 1994	Tripuraswor ,Kathmandu
2	Everest Insurance Company Ltd(EICL)	July,1994	Hattisar,Kathmandu
3	Nepal Insurance Company Ltd(NICL)	(1974 sep AD) Aswin 8 ,2061BS	

1.3 Focus of the study

Joint - venture with private commercial institutions are suffering from problem of dividend each and every year. A great issue arise in the time of dividend declaration is that which dividend policy appropriate in the company. So, the study of dividend policy of financial institution is become a relevant subjects matter to eliminate policy of the firm .The study is focusing in the area is at least five years dividend policy of the three commercial banks and three insurances companies of Nepal.

1.4 Statement of the Problem

Are the various variables important to formulate dividend policy? Statement of the problem are like that problem which are forwarding to the research objectives. Corporate dividend policy has various difficulties rather than simplicities in the developing country's business house.There are various contents in company financial subject matter among them dividend policy is a vague topic with various problem ie stability of dividend ,repurchase of stock and split, signaling.A high liquidity performance firms is aggressive to pay

cash dividend but legal constraints and desire of shareholders play dominant role. Most of the Nepalese commercial institutions are suffering in terms of dividend practices i.e. cash dividend or stock dividend which is appropriate. There is not a strong dividend strong dividend practice being followed by Nepalese corporations. Sometimes they pay cash dividend, Sometimes they issue stock dividend and both forms have been seen rare in corporate dividend practice in Nepal. Is the firm's debt position affect the dividend policy? the study is forwarded for the factor affecting to determine of dividend policy of a firm .These are the possible problem facing by policy maker of Nepalese Corporation is listed below.

- What kind of dividend practices has been seen in Nepalese Commercial banks and insurance companies?
- What are the factors that affect to determine the corporate dividend policy?
- Is cash dividend more reliable than stock dividend?
- Is cash dividend more superior than stock dividend?

1.5 Objective of the Study

Due to complexities of financial structure of company, joint –venture with private commercial financial institutions of Nepal is facing various challenging and complicated subject matter. Dividend policy is a major aspects of the company has various matter of hard and crucial subject .This study is tried to eliminate those difficult and complex decision problems. These are the main objectives or purposes of the study ,which is listed on the following.

- To examine the dividend practices of Nepalese commercial banks and insurance companies.
- To study the factor that affect the dividend policy of a firm.
- To test the reliability and superiority of cash dividend Vs stock dividend.
- To provide valuable suggestion on the basis of finding.

The study is become rationale because it has pointed various aspects of dividend policy of a firm. Firstly, the rationality study in terms of dividend practices of Nepalese commercial banks and insurance companies, which is a relevant subject matter of policy maker of each and every business house .Different company's dividend policy is depended on different variables. Some company are stopped the dividend by the lower liquidity performance, other are suffering from legal constraint of government and low portion of earning . The main aspects of the initial parts of study is how the Nepalese corporation maintaining their dividend policy by study of various variables .Secondly, the portion of dividend is depended on desire of shareholder ,legal rule, liquidity position of company, lagged and current earning ,need to repay debt etc. The main aspects of this part are what factor play the dominant role in the formulation of the company's dividend policy. Thirdly, this study is standing for finding out the impact of cash dividend and stock dividend on the financial performance of sample companies. Also, we are going to find out that which is more reliable and which is more superior between cash dividend and stock dividend .Lastly, If any not pointed subject matter are finding which are important aspects of company's dividend policy, we are recommending those valuable finding in the end chapter of thesis.

1.6 Significance of the Study:

Dividend Study is not an old phenomenon in Nepal. Very little studies under the topic of dividend policy have been seen in Nepalese research scenario. So, dividend study yet has been another crucial aspect of company's financial analysis. This study is trying to find out the post with current trend of dividend practices in Nepalese financial institutions. Most of the policy makers are going in to trouble situation that which forms of dividend and how much the dividend quantum is appropriate. This study is standing with the various critical aspect of company's dividend policy i.e. earning ,stock price ,portion of dividend ,current ratio ,return on equity. We are believed that these are the stakeholder who are benefited after completing this study.

- This study will assist the policy makers to formulate their dividend policy regarding their company. They will be able to analyze the fluctuating dividend distribution in Nepal.
- This study will be a matter of interest for the academicians, students and investor. They will be able to understand of the current dividend related practice in Nepal.
- This Study will be useful for those stakeholder i.e. debtors, creditors, money lenders, shareholder, who are changing the policy towards concerns financial institution after the research completing.
- Further dividend studies is become easier by this research work.

1.7 Limitation of the study

There are various obstacles and difficulties arise in the research report preparing process. The thesis work is completed around the certain limitations i.e. a relevancy of time frame, availability and reliability data .These are some limitations of the study which are listed on the following.

- This study of factor that affecting the dividend policy is difficult in nature .Some factor can be examine and observe but some are difficult to predict and observe.
- The data is analyzed certain normally it is based on the at least five years recent data sources.
- The problem of validity and reliability of secondary data sources.
- The study is only focusing of the dividend policy of three commercial banks and three insurance companies.
- Some company follow the both forms of dividend (Cash and Stock) But some are followed the scheme of cash dividend only.
- Different dividend payout scheme follow by different companies.

1.8 Organization of the study

It is dealing with the holistic concept of a research report .It is explained the research report as a complete form. The organization of the study is divided in to five forms, which Is listed below

Chapter I- Introduction

Chapter II-Review of Literature

Chapter III –Research Methodology

Chapter IV –Presentation and Analysis of data

Chapter V-Finding Recommendation and Summary & Conclusion

Chapter I - In this section, we are explained our study in surface. Different heading of general background, focus of the study, statement of the problem, objective of the study, limitation of the study, significance of the study and organization of the study are presented in this chapter. We can understand our mission, objectives and direction of thesis work by the introduction chapter.

Chapter II- Review of literature is important task for thesis writing .Literature gives a attractive, readable, and simplicity of report. The possible spot of literature is library, different books, past thesis and dissertations, journal, magazine etc. In the financial term analysis other useful term i.e. accounting, marketing, economic should be considered. Review of literature is study of the different theories of related subject matter, analysis of different studies, review of journal, case study, quotation of related study, study of appropriate variables. The most important task is explained the concept frame work of study area in the completing the review of literature.

Chapter III- In this chapter we are focusing the research design, nature and sources of data and tools employed. It is an important chapter because in the financial term analysis of a firm it needs the various data and different statistical tool. Data sources are important to research report completion. Research Methodology is directed in the area, limitation, probable error, tools

and technique of the research analysis for preparing and completing of the thesis.

Chapter IV- It is a body of a report .Data Presentation and analysis is started with various data. In this section we are altered the data, synthesizing of the data, and modeling to reach the clear resolution. In the preliminary survey of research report procedure the relevant data are presented i.e. EPS,DPS,MPS, D/P Ratio, net worth, current assets, current liabilities ,bonus ratio, cash dividend .Different statistical and non statistical tools are used for achieving our research objective.

Chapter V- This is the end section of report. In this section, we are presented outcome of study all of our study is depended on the presentation of this chapter. Summary and conclusion is the main theme of this report. In this part, we are recommending the any finding to the stakeholder of concerns financial institution of Nepal

CHAPTER -II

RIVIEW OF LITERATURE

Review of literature is divided in to two parts. One is conceptual framework and another is review of different studies.

2.1 Conceptual Framework

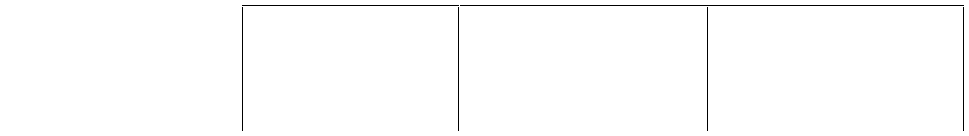
Dividend is a technical with fundamental aspects of company .Dividend decision is yet another crucial area of financial management. Company earns profit .It has distributed into two parts one is retained earning another is dividends Those portion of profit distribution to shareholder is called dividend. It is either stock dividend or cash dividend or any other kinds. “The distribution of cash dividend causes a reduction in internal funds available to finance profitable investment opportunities and this either constraint growth or requires the firm to find other costly sources of financing” (Rozett MS 1986) .There is a debate of paying dividend .Normally, a growing firm stop to pay cash dividend .If the investment opportunities is high the portion of distribution is low. If there is not any investment opportunities, the company is a aggressive to distribute all earning as cash dividend.

Management must make a decision about retained as opposed to paid out as dividend. The process of paying at “what is left” to shareholder is called dividend policy. Dividend policy deals with the earning is retaining in the firm or payout to shareholders. The another aspect of dividend is how it affect the market value of firm. High dividend is creating higher cash outflow which is good to the investor in the short run ,but in the long run the growth rate is decreased which is bad .Normally, high dividend decreases the market value of firm. But Gorden MJ argues that “Higher dividend increase the value of the shares and low dividend reduce the value .In order to maximize wealth under uncertainly the firm must pay enough dividend to satisfy investor’’. There is an ongoing debate of the company on the issue of dividend policy, that which

payout scheme is appropriate .We are focusing the various aspects of dividend policies, so it is relevance to present the other conceptual definition in briefly, which is presented below.

2.1.1 Dividend payment

Management should try to maintain regular dividend .Dividend payment is completed in the certain procedure .Firms usually pay dividend on a quarterly basis in accordance with the following procedures.



Declaration date: This is the date which the board of directors declares the dividend.

Ex-dividend date: The date is four days prior to the record date. Only investor who hold the share prior to the ex-dividend date receive dividend.

Record date: This is date of company recording that who will receive the dividend.

Payment date: This is the date when company mailed the chaque to the concern shareholders, who are receive the dividend.

2.1.2 Factor influencing dividend policy

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

1) Desire of shareholders:

Shareholders may be interested either in dividend income or capital gains. Small shareholders are not frequently purchase of the shares. They are

preferred the dividend and sometime capital gains. This groups are thus dominating body of the company, are not concerned more in dividend policy. Retained and old persons generally preferred regular dividend. Wealthy investors are very much concerned with the dividend policy. If tax bracket is high they neglected the cash dividend .They are prefer the dividend policy of retained earning and distribution bonus share. Institutional investors are in nature of speculative so they hold share for future benefit. In the closely held company management usually knows the desires of shareholders, but in the widely held company management cannot estimate the particular dividend policy because some shareholders wants to cash dividend while other prefer bonus share.

2) Legal Rules:

Certain legal rules may limit the amount of dividend a firm may pay. These legal constraints fall into two categories. First ,Statutory restriction may prevent a company from paying dividend while specific limitation very by state generally a corporation may not a dividend .Different rules and regulation control to pay dividend .The legal rule may be company specific or country specific.

3) Liquidity position:

The cash or liquidity position of the firm influences its ability to pay dividend. A firm may have sufficient retained earning but if they are invested in fixed assets, cash may not be available to make dividend payment. Thus the company must adequate cash available as well as retained earning to pay dividend.

4) Need to repay debt:

The debt position and need to pay debt also affect the dividend policy. Higher debts stop to pay cash dividend.

5) Restrictions in debt contracts

Restriction in debt contracts may specific that dividends may be paid only out of earning generated after signing the loan agreement and only when net working capital's above specified amount.

6) Profit Rate:

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

7) Stability of earning:

If the earning stable the company pay the regular dividend. A fluctuate earning causes the break in the regular dividend.

8) Tax Position:

The Tax position of shareholders also affects dividend policy. Corporation owned by largely taxpayers in high income tax bracket trend towards lower dividend payout when the income tax bracket is low the dividend payout ratio has gone in high.

9) Control

For many small firms and certain large ones, maintaining the controlling vote is very important. These owners would prefer the use of debt and retained profit to finance new investment rather than issue new stock .

10) Access to capital market :

A firm access to capital markets will be influenced by the age and size of the firm therefore a well established firm is likely to have a higher payout ratio than a smaller newer firm.

2.1.3 Stability of dividend

Stability or regularity of dividend is considered as a desirable policy by the management of most company shareholder one preferred a stable dividend not fluctuating one. All other thing be same stable dividend has a positive

impact on the market value of firm. Stability of dividend means the company regularity in paying some dividend annually. Three districts forms of such stability may be distinguished.

- Constant dividend per share or dividend rate
- Constant payout
- Constant dividend per share plus extra

Constant dividend per share or dividend rate:

Constant dividend per share or dividend rate policy is based on the payment of a fixed rupee as dividend. This policy does not imply that the dividend per share or dividend rate will never increased .If the earning is stable this policy may effective but in the fluctuation earning of company it is hard for maintaining this policy . " The dividend policy of paying a constant amount of dividend per year treats ordinary shareholders somewhat like preference shareholders without taking into account the firm's or shareholder's investment opportunities".(Brandit O.p.p. 447). So we can say that investors who have dividends as the only sources of their income prefer the constant dividend policy.

Constant payout

When the fixed percentage of earning is paid as dividend, is known as constant payout ratio policy. It is fully based on the EPS of the company. Higher retained earning find higher dividend and lower profitability reduce the portion of dividend. If the company losses no dividend shall be paid. At any given payout ratio, the amount of dividends and the additions to retained earning increase with increasing earning and decrease with decreasing earning . "It ensure that dividends are paid when profits and earned and avoided when it incurs loses."(Brandit ibid pp 448-49)

Constant dividend per share plus extra

For companies with fluctuating earning, the policy to pay a minimum dividend per share with a step up feature is desirable .This policy is considered

both constant payout and stable dividend or stable growth rate. By paying extra dividend a number of companies pay an interim dividend followed by a regular final dividend in periods of prosperity, an attempt is made to prevent, investors from expecting that the dividend represents an increase in the established dividend amount .Certain shareholder like this policy because of the certain cash flow in the regular dividend and the option of earning extra dividend occasionally.

2.1.4 Residual dividend policy

Residual dividend policy is based on the premise that investors prefer to have a firm retain and reinvest earning rather than pay them out in dividends. If the rate of return investors can obtain for themselves on other investment of comparable risk. A firm using residual dividend policy would follow these four steps.

- Determine the optimal capital budget
- Determine the amount of equity required to finance the optimal capital budget given its target capital structure recognizing that the funds used will consist of both equity and debt to preserve the optimal capital structure.
- To the extent possible, use retained earning are available them and needed to support the optimal capital budget.

We can calculate the portion of the dividend on residual policy by the following formula.

Dividend=Net income-(equity ratio x optimal capital budget)

2.1.5 Forms of dividend

Cash dividend

Most company pay dividend in cash. If a company have enough cash on its banks account, cash dividends are declared. It is relatively difficult to make

cash planning in anticipation of dividend needs when on unstable policy is followed. The cash account and the reserves account of the company will be reduced when cash dividend is paid. Cash dividend affects the both side of balance sheet. It decreases the net worth and current asset of the company. “The market price of the share drops in most cases by the amount of cash dividend distributed.” (Hasting op. ctp 370).

Stock dividend (Bonus share)

Stock dividend is also called bonus issue. The stock dividend increase the no of share outstanding .Firm pay stock dividend as a replacement of supplement to cash dividend. Stock dividend require in accounting entry transfer from the retained earning account to the common stock and paid in capital account. If the firm has stock weak liquidity position design to low or the price of stock dividend is issued instead of cash dividend. After issued of stock dividend market price per share is decreased ,net worth remains unchanged ,retained earning is decreased and both common stock and paid in capital is increased . “It may be emphasized here that the market value of share may improve as a result of the bonus issue if it is followed by increased dividends in the immediate future ,If dividend do not increase ,it is likely that market price may fall” (Gupta LC Bonus share ,Macmillan Co of India Ltd)

Bond dividend

Bond dividend by its name is a dividend that is distributed to shareholders in form of bond. Bond dividend helps to postpone the payment of cash .In other word companies declared dividend in the form of its own bond with a view of avoid cash.

Scrip dividend

A dividend paid in promissory note is called scrip dividend "scrip dividends are those paid in the company promises to pay instead of cash" (Americana, Encyclopedia Americana 1997 p-332).When earning of the company is justify dividend but the company's cash position is temporarily weak and deposit permit scrip dividend may bear a definite maturity date or the disbursement date may be left to the directors. Such dividends may be interest bearing or non interest bearing.

2.1.6 Financial signaling

Cash dividend may be viewed as a signal to the investors .Most probably, Companies with goods news about their future probability will want to tell investors .When a firm has a target payout ratio that is stable over time and it changes this ratio investors may be line that management is announcing a change in the expected future probability of the firm. The signal in various kinds i.e. dividend payout signal, stock price fluctuation signal, new financing signal. We believe that management know more about the time state of the company's earning than do outside investors. Financial signaling affect the intention of investors, may affect the stock market, also dividend speak louder than words under such circumstances. External factor is difficult to control but a internal one can be minimize by use of management efficiencies with different tools and technique.

2.1.7 Legal Provision Regarding Dividend Practice in Nepal

In Nepal, the Nepal Company Act 1997 makes some legal provision for dividend payment. These provision may seen as under section z (m) state that bonus share (Stock dividend means share issued in the form of additional share

to shareholders by capitalizing the surplus from the profit or the reserve fund of a company .The term also denoted an increased in the paid up value of share after capitalizing surplus or reserve funds.

- ❖ Section 47 has prohibited company from purchasing its own share .This section states that no company shall security of its own share.
- ❖ Section 137 bonus share and subsection (1) states that the company must inform the office before issuing bonus share under sub- section (I) this may be general meeting.
- ❖ Section 140 Dividend and sub –section of this section are as follows except in the following circumstances dividend shall be distributed among the shareholders within 45 days from the date of decision to distribute them.
  - a) In case any law forbids, the distribution of dividends.
  - b) In case the right to dividend is distributed.
  - c) In case dividends cannot be distributed within the time limit mentioned above owing the circumstances beyond anyone control and 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 and registered in the register existing shareholders at the time of declaring the dividend shall be entitled to it.

2.2 Review of different studies

2.2.1 Dividend Theories

On the relationship between dividend and the value of the firm different theories have advanced. These theories can be grouped into two categories. a) theories which consider dividend decision to be irrelevant and b) theories which consider dividend decision to be an active variable influencing the value of the firm. The main theories are presented below.

2.2.1.1 Review of Walter's model

Professor James E Walter argues that the choice of dividend policies almost always affect the value of the enterprises. His model, one of the earlier theoretical works clearly shows the importance of the relationship between the firm's internal rate of return and cost of capital K in determining the dividend policy that will maximize the wealth of shareholder.

Assumption of Walter model

- The firm finances all investment through retained earning.
- The internal rate of return(r) and its cost of capital (k) are constant.
- All earning are either distributed as dividend or reinvested immediately.
- Beginning earning and dividend never change.
- The firm has long and infinite life.

Formula for determine the market price per share

$$P=\frac{Div}{k}\Gamma\frac{r(EPS\ ZDiv)/k}{k} \quad \text{.....(1)}$$

Where, p=market price per share

Div=dividend per share

EPS = Earning per share

r =internal rate of return

k= cost of capital

Equation (1) reveals that the market price per share is sum of present of two sources of income (I) the present value of the infinite stream of constant dividends Div/k and (II) the present value of the infinite stream of capital gains r(EPS-Div) /k/k. The Eq^{n} no i) also rewrite as follows.

$$P = \frac{Div\ \Gamma\ (r/k)EPS\ Z\ Div}{K} \quad \text{.....(2)}$$

Walter 's view of optimum dividend payout ratio can be summarized below.

Growth firms (r >k)

In the condition of growth firm which expand rapidly because of ample investment opportunities yielding return higher than cost of capital. These firms are able to reinvest earning at a rate which is higher than the rate expected by shareholders. They will maximize the value per share if they follow a policy of retaining all earning.

Normal firms (r=k)

Most of the do not have ultimate surplus generating investment opportunities, generating returns higher than the opportunity cost of capital. After having exhausted such profitable opportunities, these firm earn on their investment rate of return equal to the cost of capital r=k,. The dividend policy of normal firm has not affected the market value per share in the condition of r=k.

Declining Firms (r<K)

Some of the firms do not have any profitable investment opportunities to invest the earning . Such firms would earn on their investment rates of return less than the minimum rate required by investors. Investors of such firm

would like earning to be distributed to them so that they may either spend it or invest elsewhere to get a rate higher than earned by the declining firms.

2.2.1.2 Review of Gordon's Model

One very popular explicitly relating the market value of the firm to dividend policy is developed by Myron Gordon.

Assumption of Gordon's Model:

- The firm is an all equity firm.
- No external financing available
- The appropriate discount rate k for the firm remains constant.
- The firm and its earning is perpetual
- The corporate taxes do not exist.
- The retention ratio b, once decided upon is constant .Thus the growth rate g= br is constant
- The discount rate is greater than growth rate K>br =g

According to Gordon's dividend capitalization models the market value of a share is equal to the present value of an infinite stream of dividend to be received by the share as explained earlier.

$$P_0 = \frac{Div_1}{(1 \Gamma k)^1} \Gamma \frac{Div_2}{(1 \Gamma k)^2} \Gamma .... \Gamma \frac{Div_{|}}{(1 \Gamma k)^{|}}$$

$$= \phi \frac{Div_1}{(1 \Gamma K)^1} \text{ ....(3)}$$

However, the dividend per share is expected to grow when earning are retain. The dividend per share is equal to the payout ratio (1-b) ,times earning i.e. Div =(1-b) EPS .Where b is the fraction of retained earning . The retained early are assumed to be reinvested within the all equity firm at a rate of retain

of r. his allow earning to grow at the rate of g=br per period .In the dividend capitalization model ,PV of share is determinate by the following formulas.

$$P_0 = \frac{Div(1+g)}{(1+k)} + \frac{Div(1+g)^2}{(1+k)^2} + \frac{Div(1+g)^3}{(1+k)^3} + \ldots\ldots\ldots\ldots + \frac{Div(1+g)^{\infty}}{(1+k)^{\infty}}$$

$$= \sum_{t=1}^{\infty} \frac{Div(1+g)^t}{(1+k)^t} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(4)$$

By the solving eq no (4) we get

$$P_0 = \frac{Div_1}{k-g} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(5)$$

Substituting EPS_1 (1-b) for Div_1 and br for g eq (5) can be rewritten as

$$P_0 = \frac{EPS_1(1-b)}{k-br} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(6)$$

Equation (6) explicitly shows the relationship of expected earning, EPS<Dividend policy b, internal profitability r, and all equity firms cost of capital K ,in the determination of the value of the share Eq (6) is particularly useful for studying the effects of dividend policy has represented by (b) on the value of the share.

Gordon's model can be summarized by :

- The market value of share Po increase with the retention ratio, (b) for the firm with growth opportunities i.e. r>k
- The market value of share Po increase with the payout (1-b) for the declining firm. i.e. r<K
- The market value of share is not affected by dividend policy when r=k

2.2.1.3 Review of Modigliani and Miller hypothesis

According to Modigliani and Miller's (MM), dividend policy of a firm is irrelevant as if does not affect the wealth of the shareholders. They argue that the value of the firm depends on the firm's earning which result firm its investment policy. Thus, when investment decision the split of earning between dividend and retained earning is of significant in determining the value of the firm .MM 's hypothesis of irrelevance is based on the following assumptions:

- The firm operates in perfects capital markets where investors behave rationally information is freely available to all and transaction and floating costs do not exist. Perfect capital markets also imply that no investor is large enough to affect the market price of a share.
- Taxes do not exist.
- The firm has a fixed investment policy.
- Risk of uncertainty does not exist.($r=k=k_t$ for all t)

Under the MM assumptions, r will be equal tp discount rate k and identical for all share .As a result the price of each Share must adjust so that the rate of return which is composed of the rate of dividends and capital gains on every share will be equal to the discount rate and be identical for all share. We can calculate the rate of return below.

$$r=\frac{Dividends\,\Gamma\,Capital(gainorloss)}{Shareprice}$$

$$r=\frac{Div_1\,\Gamma\,(p_{1Z}p_0)}{P_0}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(7)$$

Where p_0 is the market or purchase price per share at time o, p_1 is the market price per share at time 1, and Div, is dividend per share at time 1.As hypothesized by MM should be equal for all shares. If it is not so, the low

return yielding shares will be sold by investors who will purchase the high return yielding shares.

For MM fundamental principal of relation described by Equation (7) we can describe their valuation model as follows.

$P_0 = \frac{Div_1 \Gamma p_1}{(1 \Gamma k)}$ Where r=k ……(8)

Since r=k in the assumed world of certainty and perfect market .Multiplying both sides of equation by the number of share outstanding n, obtain the total value of the firm if no new financing exists.

$V = {}_n p_0 = \frac{n(Div_1 \Gamma P_1)}{(1 \Gamma k)}$ ……(9)

If the firm sells m number of new share s at time price of p_1.the value of the firm at time o will be.

$${}_n p_0 = \frac{n(Div_1 \Gamma P_1) \Gamma MP_1 Z MP_1}{(1 \Gamma k)}$$

$$= \frac{nDiv_1 \Gamma_n P_1 \Gamma MP_1 Z MP_1}{(1 \Gamma k)}$$

$$= \frac{nDiv_1 \Gamma (n \Gamma m) P_1 Z MP_1}{(1 \Gamma k)} \text{ ……(10)}$$

The investment programmers of a firm in a given period of time can be financed either by retained earning or the issuance of new shares or both. Thus, the amount of new shares issued will be:

$MP = I_1 - (X_1 - {}_n div_1)$……(11)

When I_1 represent the total investment survey the first period and X_1 is the total net profit of the firm during first period. By substituting equation (11) in to (10), MM should that the value of the firm is unaffected by its dividend policy.

$$_{n}P_{0} = \frac{nDiv_1 \Gamma (n \Gamma m)P_1 \, Z MP_1}{(1 \Gamma k)}$$

$$= \frac{nDiv_1 \Gamma (n \Gamma m)P_1 \, Z I_1 \, Z x_1 \Gamma_n Div_1)}{(1 \Gamma k)}$$

$$= \frac{(n \Gamma m) p_1 \, Z I_1 \, \Gamma X_1}{1 \Gamma k} \quad \text{.....(12)}$$

MM's conclusion:

MM's argument, that dividend policy does not affect the wealth of shareholder, implies that when the firm pays dividends, its advantages is offset by external financing. This means that the terminal value the share (say, price the share at first period if the holding period is one year) declines when dividend are paid. Thus the wealth of the shareholder's dividends plus terminal price remains uncharged. As a result, the present value per share after dividends and external financing is equal to the present value per share before the payment of dividend. Thus, shareholders are indifferent between payment of dividend and retained earning.

2.2.2 Review of Master Theses:

2.2.2.1 Shankar Dhodary's Study(2003)

Shankar Dhodary's is a student of Nepal commerce campus. He has written the master thesis on the topic of "Dividend policy and practice and practices of joint –venture Banks and insurance companies of Nepal." He is taking the research sample of Banks are Nabil Bank, Standard Charted Bank,Nepal Investment bank limited with samples of insurances companies are Nepal insurance company ,premier insurance company and Everest insurance company. His research objective are:

- ❖ To study various aspects of dividend policy of banks and insurances companies in Nepal.
- ❖ To examine the relationship between dividend and market price of stock.
- ❖ To analyze factor affecting dividend policy decision of banks and insurance companies.
- ❖ To provide suggestion on the basis of finding.

His major finding against research objective

-) He concludes that all the sample institution have average earning which can be considered satisfactory but some of the institution are paying high dividend and others are paying low dividend. If other things are remaining the same, the dividend per share is not relatively more stable that the dividend payment ratio.
-) Insignificant relationship between the financial indicators of banks and finance companies and not seem the same dividend policy between banks and finance company.
-) The finance indicators do not seems to reflect the capital market properly due to which stock market is imperfect and inefficient.
-) The institutions do not seems to follow the optimal dividend dividend policy of paying regular dividend as per the shareholder expectation and interest.
-) The company are ignored, neglected, and disregarded the earning and liquidity position for the issue of dividend distribution.

2.2.2.2 Smirti Gautam's Study (2004)

Smiriti Gautum is a student of Shanker Dev Campus. She has written the master thesis in the entitled of "Dividend Policy of Nepalese Financial

Institution with Reference to commercial Banks, Insurance companies and financial companies" She has taken the sample of the banks standard chartered bank, Nepal investment Bank and Nabil banks with the others three insurance company and three finance companies. Her research objectives are:

- To study and company various aspects of dividend policy of banks, insurances and finance companies in Nepal.
- To examine the relation between dividend and share price of stocks.
- To analyze the factor affecting the dividend policy decision of banks and finance company.
- To put forth suggestion on the basis of finding.

Her major findings are:

- For the given period of study the average EPS for banks are generally higher than for other sectors where as it is lowest for the finance company
- The average DPS of the companies studies also shows rather skewed distribution of dividend across the sector as well as among the companies in the same sectors .Among the banks SCBL has the highest average DPS of Rs 90.21 followed by NABIL at Rs 41.00 and NIBL at Rs 21.00.
- The co-efficient of variation of the three sectors study shows that banking sector has a lower fluctuation in EPS as well as DPS where as the fluctuation in the greatest for the financial companies studied.
- The analysis of DPS shows that DPS is consistency high for all the companies studied.

She has focusing the EPS,DPS,MPS.DPR ,P/E ratio, correlation regression coefficient(a)and she also used the hypothesis, Her main aim is how

the Nepalese financial institution followed the dividend policy. She has addressing the current system of dividend policy .Her conclusion that the system of liberal economic policies and capital markets is still a relatively new phenomenon in Nepal and is growing stronger. There is not a concrete and stable dividend policy followed sample companies. Dividend Payout ratio 40% has been seem that the companies are actually payout the dividend .The distribution of dividend has a positive impact on the market price per share expect with one bank(NIBL).

2.2.2.3 Krishna Prasad Upadhyay's Study (1999)

Krishna Prasad Upadhyay is a student of Central department of Management TU, Kritipur. He has written the Master thesis in the topic of "Dividend policy and practice: A comparative study of Nepal Bank Ltd and Nepal Arab Bank Ltd" his research objective are listed below.

- To highlight the various aspects of dividend policy and practices of NBL and NABIL
- To analyze the relationship of dividend with various key variables such as earning per earning per share, net profit, net worth and stock price.
- To recommend to the policy makers and executives to overcome various issue and gaps based on the finding of the analysis is.

He is focusing the dividend practices of the two commercial Banks of Nepal. His major conclusion against research objectives are:

- The net profit and DPS are positively correlated in both the banks which means dividend decisions of these banks depends upon net profit earned .So, an increases in net profit result in an increase the DPS and vice versa.

- ❖ The analysis of dividend payout ratio indicates that both the banks have adopted the conservative policy.
- ❖ Simple regression analysis of DPS and EPS shows that the NABIL has been paying more dividend than NBL.
- ❖ Simple regression analysis if average stock price on DPS shows that beta coefficient one positive in both the banks but beta coefficient in NBL higher than NABIL.
- ❖ In both the banks DPS, EPS and average stock price have been fluctuating one of the reasons being is sources of bonus share .Bonus share to have been distributed arbitrator ignoring its consequential impact.
- ❖ To conclude neither government participation in NBL management nor NIBL has any significant differences in the dividend policy of those commercial banks.

2.2.2.4 Ajit Raj Pokheral's Study(2002)

Ajit Raj Pokheral is the student of Central Department of Management. He has written the thesis on the entitled of "Dividend policy: Comparative study of Listed Finance Companies". He has normally focused the finance company of Nepal. His main research objectives are:

- ➢ To analyze the impact of dividend per share are other variables regarding dividends on market prices per share.
- ➢ To analyze the relationship of dividend per share with other variables such as earning per share, Market price per Share, dividend payout ratios, dividend yield and return on the net worth.
- ➢ To examine the dividend policy of listed finance position companies in term of dividend and other variables regarding dividends.
- ➢ To provide valuable suggestions regarding dividend policy.

He use the different statistical and financial tools .By the analysis his Master Thesis ,we can conclude that he has successfully analysis the DPS, EPS, MPS, D/P ratio, P/E ratio. His conclusion under study is: It is a study of dividend policies of Nepalese finance company. The position of finance companies can see neither better nor bad The relationship between market price per share and other variables like EPS, DPS, Payout ratio, P/E ratio ,dividend yield and return on net worth is not Perfectly correlated .Normally, the relationship of the DPS and MPS is positive but without Narayani finance companies other companies has a negative relationship between the DPS and MPS. We can conclude that at the time of financial institution's development process this study is become relevance to eliminate the difficulties of building dividend policies.

2.2.3 Review of different Studies

2.2.3.1 Dhameja's Study (1978)

His sample included 158 non- government, public limited manufacturing companies listed on various India Stock Exchanges. He was tasting dividend behavior of Indian companies by size (total assets and total sales), industry (the Bombay stock exchange classification) growth (in total assets and EPS) and control (as given in monopoly and inquiry report and the Dutt committee). The study found that there was no statistically significant relationship between dividend payout on the one hand, and industry and size on the other. Growth was inversely related to dividend payment .As regards dividends rates adjusted for bonus and rights issues etc. It was significant directly related to industry growth and mildly to size. He also applied is Lintner "model to pooled data for the year 1963-72. His main conclusion are :that dividend decision are better explained by Lintner'' model with current profit and lagged dividend as explanatory variable that due to importance of

investment and debt among foreign and group companies or huge growth companies .He also argued that high of debt has negative influence of dividend policy. Again, he pointed that the low growth companies changed their depreciation methods to jack up profits while high growth companies changed to depreciation methods to even out the burden of depreciation throughout the life of the assets. Depreciation was also changed to enable companies to issue bonus share and to declare cash dividend.

2.2.3.2 Krishnamurthy and Sastry's Study(1975)

The major question which they have examined in whether firm in India follow a suitable dividend policy in the long run, and whether they after dividend policies to suit their investment plans and external financing situation. Their study result that did not support permanent income hypothesis of profit in dividend behavior .Dividend decision were found lower for the traditional industry. They also found that external financial activities was determined by internal capacity and investment expenditure, fixed and or/inventory .Inventory investment append to have larger impact in the flow of external finance company to fixed investment. The study concluded that there is not interrelationship between investment , dividend and external financing.

2.2.3.3 LC Gupta's Study(1973) Bonus Share in India

1. He studied 496 bonus issue during 1948-71
2. Bonus Share were issued by company not necessity with a view to increase total dividend distribution
3. Bonus issue occurred at irregular intervals and on widely varying ratio.
4. Higher bonus ratio is sign of higher dividend rate.

5. The speculative price rise which occurred immediately after bonus announcement was frequently based not too much on a realistic appraisal of the fundamental factors governing profit and dividend as on rumors and psychology/
6. The dramatic price adjustment that took place forms the level immediately after bonus announcement surest that the immediate price was haphazard and not suffering discriminating being carried out too far in same case and too little in others.

2.2.3.4 Rao and Sharma's Study

They use the linter model in study. They tested dividend and retained earnings of public and private limited companies in India for the Period 1955-56 to 1965-66. They used three different definition of earning.

a) Profit after tax

b) Cash flow and

c) Profit below depreciation

It is observed that Linter's model appropriate with net profit significant in five industries and cash flow in other four. Payout ratios differ widely between industries while no clear pattern is observed in the short run payout ratio, The long run coefficient in the agriculture based industries are lower as compared to iron ,chemical and cements.

2.2.4 Review of Journal and Articles in Nepalese perspective

2.2.4.1 Radhe Shyam Pradhan's Study(1993)

The main objectives of Pradhan's study on "stock market behavior in a small capital market" where as follows.

- To assess the stock market behavior in a small capital market where as follows.

- ❖ To assess the stock market behavior in Nepal.
- ❖ To examine the relationship of market equity market value to book value price earning and dividend with liquidity ,profitability leverage assets turnover and interest coverage.

Following finding were observed in the connection with dividend behavior.

- ⁾ Higher the earning on status leads the larger the ratio of dividend per share to market price per share.
- ⁾ Stock with large ratio of dividend per share to market price per share have lower leverage ratio.
- ⁾ Stock with large of dividend per share was positively correlated.
- ⁾ Positive relationship between dividend payout and profitability.
- ⁾ Positive relationship between dividend payout and turnover ratio.
- ⁾ Positive relationship between dividend payout and interest coverage.
- ⁾ Earning, assets turnover and interest and interest coverage are more variable for stock paying high dividends.

2.2.4.2 Manohar K. Shrestha's Study (1992)

Shrestha's paper is presented on the fifth annual general meeting of Nepal Arab Bank. On the paper he opines that the shareholders have common views on the problems and constants of shareholders which are follows.

- ⁾ The cost push inflation at exorbitant rate has the shareholders to except higher return from their investment.
- ⁾ Multi decrease the purchasing power of the income Nepalese currency to the extend that higher return by wag of dividend just a natural economic consequences of it.

- Erosion in the purchasing power of the income has made it that dividend payment must be directed to enhance shareholders purchasing power by raising dividend payout ratio on the basis of earning and cost things.
- Indo –Nepal trade transit dead lock has become a sort of welfare putting rise in the cost of living index to a considerable extern. This one of this reason which made shareholder to except high dividend for satisfactory dividend.
- The waiting of fine years with peanut dividend in the previous year is equally a strong enforceable reason of the bank shareholder's to expect handsome dividend already annual general meeting.
- One way to encourage risk taking ability and preference is to have proper risk return trade off by banks management board in away that higher return must be the investment rule for higher risk takers that compare bank's shareholders. Regarding those difficulties he requests the bank management board to rethink the smaller relatively to payment at dividend. At the close of paper Shrestha's opines that the bank is trying its best to satisfactory both the shareholders and employees.

2.2.4.3 K. D. Manandhar's Study (2000)

A study (2000) about to test whether Nepalese corporate firms consider the lagged earning and dividend paid to pay the dividend in current year**.** For the test 17 sample Nepalese corporate firms are considering for study purpose. His major finding against research objectives are:

- There is significant relationship between change in dividend policy in terms of DPS and change in lagged earning.
- In overall there is positive relationship between charge in lagged consecutive earning and DPS.

- There is relationship between lag profit and dividend.
- When charged in lagged consecutive earning is greater than zero ,in 65% the case change in dividend payments.
- Overall increase in EPS (t) has resulted to the increase in the dividend payout in 66% at the cases while decrease in EPS resulted decrease in EPS resulted decrease in dividend payments.
- Nepalese corporate firms have followed the practices of maintaining constant dividend payout per share.
- Corporate firm do not take into account that one year and two year lagged earning.

In overall Nepalese corporate firm are reluctant to decrease dividend either keeping dividend payment contents or higher to take the advantages of information contents and signaling effect of dividend relating to the firm, continued programmed and performance should financial strength favorable investment environment ,lower risk ability to maintain dividend rate and finally to increase the market price of the stock in the stock market.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction:

Research Methodology is a scientific method to complete the research report. Research work has a systematic manner. Research Methodology is a scientific method to complete the research report. Research work has a systematic manner. Research Methodology gives a direction to complete the final thesis. In this chapter we are discussed about the research design , Population and sample ,source of data, data collection technique, data analysis tools and definition of variables.

3.2 Research Design:

Research design is a control tool to save the researcher extra freedom and try to eliminate the bias variable. It is a plan and strategies of investigation. It is control the variance of the variance of the research answer against research questionnaires. Research design plays a significant role to complete the research work. Especially, descriptive research design is important to complete the thesis work. It is concerned with the procedure of the starting to end task of thesis.

3.3 Population and sample:

These are some commercial Banks and insurances companies are actively traded in Nepalese financial market.

Table 3.1 Some Nepalese commercial banks and insurance companies

SN	Commercial Banks	SN	Insurance Companies
1	Everest Bank	1	Nepal Insurance Company
2	Nepal Investment Bank	2	Himalayan General Insurance
3	Lumbini Bank	3	United Insurance Company
4	Himalayan Bank	4	Everest Insurance Company
5	Nepal SBI Bank	5	Premier Insurance Company
6	Nabil Bank	6	Neco Insurance Company
7	Bank of Kathmandu	7	Alliance Insurance Company
8	Nepal Industrial and commercial	8	Sagarmatha Insurance
9	Machhapuchre Bank	9	Nepal life Insurance company
10	Laxmi Bank	10	Life Insurance Corporation
11	Kumari Bank	11	Prudential Insurance Company
12	Standard Chartered Bank(Nepal)	12	Lumbini General Insurance
13	Nepal Credit and Commerce Bank	13	Shikher Insurance Company
14	Siddhartha Bank		

From the above companies we have selecting the following six companies (population) listed in Nepal Stock Exchange(NEPSE). The samples are selected as follows:

SN	Banks	SN	Insurance Companies
1	Nepal Investment Bank Ltd	1	Nepal Insurance Company Ltd
2	Standard Chartered Bank (Nepal) ltd	2	Premier Insurance Company Ltd
3	Nabil Bank Ltd	3	Everest Insurances Company Ltd

3.4 Sources of data:

Nature and sources of data is important in the process of research methodology. The data collection method is either primary or secondary .Our study is based on the analysis of banks and insurance company's published report, so secondary data is more useful here. We are also following the method of primary data collection to eliminate the research problem. Primary sources of data are more reliable and validity against the secondary data sources. The main data sources of secondary are .newspaper, magazine, annual

reports, national planning commission, security boards of Nepal, Central Bureau of statistics and wave site of NEPSE and concerns financial institution

3.5 Data collection technique

The relevant data have been collected from the concerned banks, insurance companies under author of Nepal stock exchange by paying frequent visit. Similarly, the required data have also been acquire for the various articles and journals available in Nepal administrative staff collage, central library. The primary data have been collected by making questionnaire and telephone interview. The questionnaire and telephone interview is asking to the management level staff of concerned financial institution. Especially, the company's annual report, information of Nepal stock exchange and security board of Nepal provide us the applicable data for matching our research objectives.

3.6 Data analysis Tools:

Other important instruments are data analysis tools. Different term and formulas are effective for analysis of data. The data itself cannot give the appropriate solution. We are study the data by alteration, synthesizing and modeling by use of analysis tools. The possible data analysis tools are presented on the following.

3.6.1 Simple arithmetic mean ($\bar{X}$)

Arithmetic mean or simple a "mean" of a set of observations in the sum of all the observations divided by the number of observations .It is also called the average. There are various aspects of arrange i.e. mean, median and mode. But in the practical consideration simple arithmetic mean ($\bar{X}$) is most reliable than others .

We can calculated the ($\bar{X}$) by this formula.

$$(\bar{X}) = \frac{X}{n}$$

Where, X =sum of the observation

n= no of observation

3.6.2 Standard deviation (±)

The standard deviation is the absolute measure of dispersion in which the drawbacks presents in other measures of dispersion are removed .It is said to be the best measure of dispersions it satisfies most of the requisites of a good measure of dispersion. Standard deviation is defined as the positive square root o the mean of the square of the deviations takes from the arithmetic mean. It is denoted by ± .We can calculated standard deviation by the following formula.

$$\pm = \sqrt{\frac{(X \; Z \; X)^2}{n}}$$

Where, ± =standard deviation

X=Sample size

($\bar{X}$)=Mean sample size

n=no of observation

3.6.3 Coefficient of variation (CV)

Standard deviation is the absolute measure of dispersion .The relative measure of dispersion based on the standard deviation is known as coefficient of standard deviation. The coefficient of dispersion based on the standard deviation multiplied by 100 is known as the coefficient of variation (CV) .If ($\bar{X}$) be the arithmetic mean and ± ,the standard deviation of distribution ,then the c.v. is defined by:

$$CV = \frac{\pm}{X} X100\%$$

CV is calculated in percentage basis. It is independent of unit. So, two distributions can better be compared with the help of c.v. for their variability. less the c v more will be the uniformity, consistency etc and more the c.v. less will be uniformity, consistency etc.

3.6.4 Correlation Coefficient (r)

Two variable are said or to have “correlation” .When they are so related that the change in the value of one variable is accompanied by the change in the value of the other .The measure of correlation called the ‘correlation coefficient’ ,the degree and direction of movement .But the important thing that is to be noted is that correlation analysis only help undetermined the extent to which the two variables are correlated but it does not tell us about cause and effect relationship .Through ,there is a high degree of correlation between two variable one cannot say which one is the cause and which one the effects.

r=

3.6.5 Coefficient of determination (R^2)

If we want to forecast Y dependent variable based on the value of X (independent variable),it is worthy to know what extent X accounts for variation in Y. The coefficient of determination denoted by square of correlation coefficient r^2 measure the strength of linear relationship between two variables. The mathematical relationship of r^2 is given by:

$$r^2 = \frac{a \quad Y \Gamma b \quad XY \; Zn Y^{z^2}}{Y^2 \; Zn \quad Y^{z^2}}$$

The value of r^2 shows the effects of variation of X in the variation in Y . If r^2 is too low ,it indicates to look for another independent variable or include other variable in the analysis.

3.6.6 Probable Error (P.E.)

Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r. If r be the calculated value of r from a sample of n pair of observations ,than PE is defined by:

$$P.E.=0.6745\frac{1Zr^2}{\sqrt{n}}$$

It is used in interpretation whether calculated value of r is significant or not .If r<P.E -insignificant ,when r> 6 PE- significant and if PE< r < 6PE - nothing concluded .In other cases ,nothing can be correlation coefficient may be used to determine limits with in which the population correlation coefficient lies. Limits for population correlation coefficient are r { P.E.

3.6.7 Standard Error (S.E.)

The statistical measure of standard deviation may be computed both from all observation in a population or from the observation of a sampling distribution. Where an average amount of variability of the observations of a population is computed. It is known as standard deviation but an average amount of variability of the observations of a sampling distribution is computed ,It is known as standard error. In the strict sense the standard deviation of the sampling distribution of sample statistic is known as its standard error (S.E.) of the statistic .Hence ,the standard deviation computed

from the observations of a sampling distribution of a statistics. Thus ,The standard error of the statistics is given by :SE (t) = Var(t)

3.6.8 Regression Constant (a)

Literal meaning regression is stepping or returning back to the original position. The theory of regression at first is originated by Sir F Galton. Regression analysis is used as a tool of determining the strength of relationship between two variables. Thus it is a statistical device , with the help of which ,we can estimate or predict the value of one variable when the value of other variable known. The unknown variable when the value of other variable is independent variable. We can estimated the regression constant(a) is y=a+bX (where a=intercept of line, b=slope of the line/coefficient of variable, X=independent variable and y= dependent variable) .

3.6.9 Multiple Regression Analysis

In the calculating the dividend, we are considered the different variable. Various factor influencing the dividend decision so, the model of multiple regression tool for estimating the dividend. The dividend is calculated on the following formula:

$Y=a+b_1x_1+b_2x_2+b_3x_3+\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots+.b_n x_n$

By substituting the variable we get,

$Div=a+b_1 Div_{(tZ1)}+b_2 Liq+b_3 Earning$

Where (Y) div= dividend

a= constant

b =coefficient of variable

$x_1 Div_{(tZ1)}$ =last year dividend

x_2 Liq=liquidity position of company

x_3 Ear=earning per share

3.6.10 t-test

t-test is established by R A Fisher in 1926. If the sample size is less than 30,t-test is applied in the testing of hypothesis. Our study is focusing to examine the between two and more than financial institution. The t –test for difference between two means are used to test whether two independent samples have been drawn from two normal populations having the same means and equal population variances or there is significant difference between population means from which the samples.

3.6.11 F- statistics

By the various limitation of hypothesis test of Z- test, t test the F - statistics is development to eliminate those difficulties. The main aspects of f test is application on testing more than three sample mean and standard deviation by one way and two way ANOVA table. F –statistics is useful to also test the variance between two samples.

3.7 Definition of variables:

In the study of dividend policy of commercial banks and insurance companies, there are various play the significant role to reach the concrete solution. Without these variables the study is uncompleted and cannot reach the target solution. The possible variables are EPS, DPS, MPS, DPR, P/E Ratio dividend yield and earning yield etc. These variables are presented in the following.

3.7.1 Stock dividend ratio

Stock dividend ratio is the ratio that portion owing the new share by existing shares. It is a payment criteria of stock dividend .In practical there is two forms at obtaining or estimating the stock dividend. One is stock dividend ratio another is stock dividend rate i.e.

Stock dividend ratio 10:1 means one new share for ten existing share

Stock dividend rate =5% means: No of existing share X $\frac{5}{100}$ =no of stock dividend(Share)

Stock dividend @ par=add in common stock

Stock dividend @ premium= add in paid of capital

Stock dividend @ market price =Deduct from retaining earning

3.7.2 Earning Per share(EPS)

The profitability of the common shareholder can also be measured in many other ways .One such measure is to calculate the earning per share. The earning per share is calculated by dividing the profit after taxes by the total number of common (ordinary) share outstanding.

$$EPS = \frac{\text{Profit after Tax}}{\text{Number of common share outstanding}}$$

$$\text{EPS before stock dividend} = \frac{\text{Profit after tax}}{\text{Number of common share outstanding}}$$

$$\text{EPS after Stock Dividend} = \frac{\text{Profit after tax}}{\text{Number of existing share + Bonus share}}$$

3.7.3 Dividend per share (DPS)

The net profit after taxes is belongs to the shareholder .But the income which they really receive is the amount of earning distributed as cash dividends. Therefore, a large number of present and potential investor may interested in DPS ,rather than EPS.DPS is the earning distributed to ordinary shareholder dividend by the number of ordinary share outstanding.

$$\text{DPS} = \frac{\text{Earning paid to Shareholders}}{\text{No of ordinary share outstanding}}$$

$$\text{Cash DPS} = \frac{\text{Cash Dividend}}{\text{No of Share out standing}}$$

$$\text{Stock DPS} = \frac{\text{Value added in common stock}}{\text{No of share outstanding + Bonus Share}}$$

3.7.4 Market Price Per Share (MPS)

Market price per share is worth of the shareholder. We can calculate the MPS by dividing the no of share outstanding to market value of firm. Normally, market price per share is determinate by capital capital market.

$$\text{MPS} = \frac{\text{Market Value of firm}}{\text{No of Share outstanding}}$$

MPS after cash dividend =MPS Before cash dividend – Cash dividend per share

$$\text{MPS after stock dividend} = \frac{\text{MPS before stock dividend}}{\text{1+ Stock dividend in fraction}}$$

3.7.5 Dividend payout ratio (D/P ratio)

Simply put, the dividend payout ratio is DPS (or total dividends) dividend by the EPS (or total shareholders earning).

Payout ratio = $\frac{DPS}{EPS}$

Earning not distributed shareholder are retained in the business. Thus retention ratio is: 1-payout ratio. We can know the growth in the owners equity as a result of retention policy.

$$g = b \times ROE$$

when g = growth rate, b = retention ratio, ROE = Return on equity

3.7.6 Price earning ratio (P/E ratio)

The reciprocal of the earning yield is called the price earning (P/E) ratio.

Thus Price earning = $\frac{MPS}{EPS}$

Price earning ratio is widely used by the security analysts to value the firm's performance as expected by investors. It indicates investor's judgment or expectations about the firms performance .Management is also interested in this market appraisal if the firms performance and will like to find the causes, if the P/E ratio declines.

3.7.7 Dividend and earning Yield :

The dividend yield is the dividend per share divided by the market value of per share and earning yield is the earning per share divided by the market value per share. That is:

Dividend Yield = $\frac{DPS}{MPS}$

Earning Yield = $\frac{EPS}{MPS}$

The dividend yield and earning yield evaluate the shareholders return in relation to the market value of the share. The earning yield is also called earning price ratio. The information on the market value per share is not generally available from the financial statements .It has to be collected from external sources, such as the stock exchanges.

CHAPTER –IV

PRESENTATION AND ANALYSIS OF DATA

Presentation and analysis of data is important aspects of each and every research work. To achieve the research objective ,it is required that the relevant data's are altering, synthesizing and modeling .Normally ,secondary data are presented ,which is from annual report of sample companies with finding the library of SEBON. We are going to divided this chapter in to three sub –chapter i.e. dividend practice of Nepalese commercial Banks and insurance companies, factor affect to determine the policy of a firm and reliability and superiority of cash dividend Vs stock dividend.

4.1 Dividend practices of Nepalese Commercial Banks and insurance Companies

In this section ,we are going to present the scenario of cash dividend and stock dividend practices of sample company at first. Then we also present the application of different variables i.e. EPS ,DPS ,D/P ratio P/E ratio earning yield and dividend yield By the use of average , standard deviation (SD) and coefficient of variation (CV) to test the consistency and fluctuation of various applicable variables.

4.1.1 Analysis of dividend distribution

Dividend is distributed either forms of cash or stock dividend(Bonus share). Now ,we are going to show the scenario of dividend distribution of sample institution's dated of 02/03-06/07 by the following comparative tables.

Table 4.1 Comparative dividend distribution of three commercial Banks

Year ended	NIBL		SCBNL		NABIL	
	Cash	Stock	Cash div%	Stock	Cash	Stock
04/05	20	0	110	10%	50	0
05/06	15	0	110	0	65	0
06/07	12.5	0	120	0	70	0
07/08	20	35.46%	130	10:1	85	0
08/09	5	25%	70	10:1	100	5:2

Above table (4.1) is presented the comparative dividend distribution of three commercial banks i.e. NIBL, SCBNL and NABIL. The table show that SCBNL has highest portion of dividend and NIBL seems low portion of dividend. With the compare of three banks NABIL bank stands with moderate level. The highest portion of dividend 140% is seemed in SCBNL in the year 07/08 and NABIL in the year 08/09. The lowest portion of dividend declared by NIBL in the year 08/09.In the year 04/05 NIBL declares at 20% cash div, like that SCBNL distributed large portion of dividend ie.110% cash dividend and 10% stock dividend. In such year NABIL paid 50% cash dividend .By the study of five years data, all three banks are not absence to declare the dividend, the forms of dividend is either cash or stock. NIBL has issued bonus share in the year ,07/08 and 08/09 and NABIL bank declare the bonus ratio 5:2 only in the year 08/09 . The highest portion of cash dividend pay by SCBNL with 130% in the year 07/08.The lowest portion of cash dividend is declared by NIBL in the year 08/09. The largest portion of bonus ratio has been seen in the same year i.e. 40% by NABIL. The lowest 10% issued by SCBNL in the year 04/05,07/08 and 08/09.Normally ,company board of director declared the portion of dividend and company general assembly

approved those decision. In the preliminary survey of dividend declaration and distribution, we concluded that SCBNL has a good performance, Nabil showed the satisfactory and NIBL has weak position and there is not found any deviation in terms of dividend declares and distributes.

Table 4.2 Comparative dividend distribution of three insurance companies

Year ended	PICNL		EICL		NICL	
	Cash	Stock	Cash div%	Stock div	Cash	Stock div
04/05	0	0	0	1:1	10	0
05/06	0	0	0	1:1	0	30
06/07	0	0	0	2:1	10	0
07/08	0	1:1	0	6.61%	0	0
08/09	5.78	10:11	0	12.50%	0	0

As compared of commercial banks, insurance companies have showed the irregular, weak performance in the dividend distribution. At the five years scenario, PICNL has announced the dividend only in the 07/08 and 08/09.EICL declares the dividend regular but lowest portion of dividend .It has issued only 6.61% stock dividend in the year 07/08.In the preliminary survey of dividend policy of above three insurance companies , we conclude that most of the case is found to declares of stock dividend or Bonus share .Only PICNL has followed the payment of earning in the year 08/09and 10% cash dividend was paid by NICL in year 04/05 and 06/07.Also found that there is no any deviation in terms of dividend declaration and distribution like commercial banks.

Table 4.3: Comparative analysis of payment of cash dividend of three commercial banks

Year ended	NIBL	SCBNL	NABIL
04/05	20	110	50
05/06	15	110	65
06/07	12.50	120	70
07/08	20	130	85
08/09	5	70	100
$\bar{X}$	14.50	108	74
±	5.57	20.39	17.14
CV%	38.41	18.87	23.16

Commercial banks NIBL, SCBNL and NABIL have presented the regular portion of payment of cash dividend. NABIL pay highest cash div in the year 04/05 and 07/08 with 20%. SCBNL declare above 100% cash dividend without the year 08/09. NABIL has showed the progressive portion of dividend from dated 04/05 to 08/09.The average div of NIBL is found 14.50 % , SCBNL 108% and NABIL has found 74%.In terms of consistency analysis SCBNL has seen low risk among others .It has found CV with 18.87% .The most risky bank is NIBL standing with highest portion of 38.41%.

Table 4.4 comparative analysis of payment of cash dividend of three Insurance companies

Year ended	PICNL	EICL	NICL
04/05	0	0	10
05/06	0	0	0
06/07	0	0	10
07/08	0	0	0
08/09	5.78	0	0
$\bar{X}$	1.156	0	4
±	2.06	0	3.79
CV%	178%	0	94.75%

Above table 4.4 has showed the comparative analysis of portion of cash dividend of three insurance companies. The EICL has not any declared cash div on the following date .PICNL show only one in the year of 08/09. NICL is declared 10% dividend in the year 04/05,The company average of PICNL and NICL are 1.156 and 4 respectively. In the preliminary observation of data we concluded that ,NICL is less risky with CV 94.75% as comparison of PICNL .We are concluded that the investment in EICL is most risky because it has not declared any dividend up to the year 04/05.

Table 4.5 comparative analysis of payment of Stock dividend of three Commercial banks

Year ended	NIBL		SCBNL		NABIL	
	In %	In ratio	In %	In ratio	In %	In ratio
04/05	0	0	10	10:1	0	0
05/06	0	0	0	0	0	0
06/07	0	0	0	0	0	0
07/08	35.46	20:7	10	10:1	0	0
08/09	25	4:1	10	10:1	40	5:2
$\bar{X}^{z}$	12.09	4.8:1.6	6	6:0.6	8	1.04
$\pm$	11.93	6.80:2.42	3.09	3.09:0.309	14.31	.89:0.7155
CV%	98.67	141.66:151.25	51.5	51.5:51.5	178	89:178

The portion of stock dividend (bonus share) of three commercial banks are become weak position as comparison of payment of cash dividend The table 4.5 has presented the portion of stock dividend of NIBL,SCBNL and NABIL .All of the banks are absence to issue bonus share in initial year.On the period of observation the highest portion of dividend is declared by NIBL in the year 08/09.Like that the lowest portion of dividend is found in the SCBNL of the year 04/05,07/08 and 08/09.The average portion of bonus share is

highest of NIBL of 12.09% than NABIL and the weak position show that SCBNL with weight 6% .In the percentage point of view SCBNL has less risk to invest. Another ratio point of view has also found the most consistent in SCBNL with 51.5% CV. So we can concluded that there is not any deviation found in study of CV either percentage method or ratio method.

Table 4.6 Comparative analysis of payment of Stock dividend of three Insurance Companies

Year ended	PICNL		EICL		NICL	
	In %	In ratio	In %	In ratio	In %	In ratio
04/05	0	0	100	1:1	0	0
05/06	0	0	100	1:1	30	10.3
06/07	0	0	50	2:1	0	0
07/08	100	1:1	6.61	16:10	0	0
08/09	110	10:11	12.50	8:1	0	0
$\bar{X}^{z}$	42	2.2:2.4	53.82	5.6:1	6	2:0.6
$\pm$	39.96	3.52:3.63	40.53	5.81:0	2.19	3.53:1.07
CV%	95.14	160:151	75.30	103:0	36.5	176.5:178

Above table 4.6 has showed the comparative study and analysis of record stock dividend (Bonus share) of three insurance companies .In that table ,we can see that the premier insurance company has issued bonus share in the year 07/08 and 08/09.EICL is not absence to issue stock dividend on the following time ,but NICL issue only one year on the period of observation. The average ratio of stock dividend has found highest level in EICL with 53.82% than PICNL 42% with comparison of three banks. NICL has seen only 6% average bonus share .The PICNL is most riskiest company with high level of CV.NICL has most consistency found in the 5 years observation period. But we preferred to invest in EICL because it has declared regular dividend although it has less consistency than NICL.

4.1.2 Analysis of Earning Per share (EPS)

Normally, the performance and achievement of the business organization are measured in terms of capacity or generate earning .High level of EPS has seem better performance but the lower one has been seem that the weak or poor financial performance. High level of earning also may determinate the high portion of dividend in most case. Now, we are going to present the earning of the sample commercial banks and insurance companies.

Table 4.7 comparative analysis EPS of three commercial banks

Year ended	NIBL	SCBNL	NABIL
04/05	39.56	149.30	84.66
05/06	51.70	143.55	92.61
06/07	39.31	143.55	103.45
07/08	59.35	175.83	129.21
08/09	62.56	167.37	140
$\bar{X}$	50.50	155.92	109.98
±	9.60	13.24	21.24
CV%	19	8.49	19.31

Above table (4.7) has showed the comparative EPS of NIBL,SCBNL and NABIL .We can clearly see that the highest EPS has found SCBNL of the year 07/08.The trend of EPS is high level at SCBNL, moderate level at NABIL and least level of EPS has found in NIBL. The average EPS of NIBL ,SCBNL and NABIL has found 50.50,155.92 and 109.98 respectively. We can say that by the average EPS analysis ,SCBNL stand with growing earning ,become a good firm. NABIL seem a moderate or satisfactory firm but as compare of three banks NIBL has showed the poor performance in terms of EPS. We can also say SCBNL is a least risky firm as comparison of NABIL and NIBL in terms of EPS because the coefficient variation of SCBNL is least with only 8.49 as comparison of NABIL and NIBL i.e. 19.31%,19%.

Table 4.8 comparative analysis EPS of three Insurance companies

Year ended	PICNL	EICL	NICL
04/05	19.90	61.74	24.97
05/06	25.13	57.22	32.63
06/07	46.68	16.87	24.68
07/08	43.54	13.94	27.01
08/09	18.43	24.54	21.25
$\bar{X}$	30.73	34.86	26.10
±	26.80	20.44	3.74
CV%	87.21	58.63	14.32

As comparison of commercial banks ,insurance companies have lower EPS, which we can conclude from table 4.7 and table 4.8 .The highest and lowest EPS of EICL has showed the fluctuation of earning where it earn highest EPS Rs 61.74 in the year 04/05 and lowest level of earning seem in the year 07/08 i.e. Rs 13.94 The trend of EPS of PICNL is lower in the year 1st and 2nd year and become improve its earning in the year 3rd and 4th year but at 5th year the EPS is reduce at dramatically by 25.11 In case of EICL the EPS of initial years is become satisfactory but then the EPS is decline by high portion. In case of NICL there is finding the any fluctuation on earning. The average EPS Rs 34.86 of EICL has showed the better performance than the NICL's average EPS is least of Rs 26.10.The NICL is more consistency in terms of EPS, where coefficient of variation has found least portion i.e. 14.32%. Another PICNL is less consistency firm with the CV 87.21% .In the simple observation are preferred to invest in NICL ,which has least fluctuation .The PICNL is more riskiest company with highest level of CV i.e. 87.21%

4.1.3 Analysis of Dividend per share

Corporate dividend policy's major aspect is DPS or dividend per share. Dividend per share is become a relevant subject matter because the corporate dividend practices reflect in to directly DPS. Now, we are going to comparatively study of DPS of commercial banks and insurance companies, which is listed below.

Table 4.9 comparative analysis DPS of three commercial banks

Year ended	NIBL	SCBNL	NABIL
04/05	19.99	120	50
05/06	15	110	65
06/07	12.50	120	70
07/08	55.46	140	85
08/09	30	80	140
$\bar{X}$	26.59	114	82
±	15.62	19.59	31
CV%	58.74	17.18	37.80

Corporate dividend study's is completed around the area of DPS. DPS is come portion of dividend divided by no of share outstanding. Commercial banks has showed the higher EPS so, they are declared regularly at the some portion of dividend. Above table 4.9 has been showed that the highest dividend is declared by SCBNL and NABIL in the year 07/08 and 08/09 respectively . The lowest portion of Dividend is paying DPS rs 12.50 by NIBL in the year 06/07.DPS is found combined form of cash dividend and stock dividend .The average DPS is seen in the SCBNL is Rs 114,which is highest among the banks. The all sample banks are focusing the cash dividend than stock dividend. The another CV analysis has found that SCBNL has more consistency than NABIL. This bank has less fluctuated in the issue if dividend declares and distributes. We are clearly calculated the CV of SCBNL ,NIBL

and NABIL are 17.18%,58.74% and 37.80% respectively. In the simple observation, in most case DPS is related with EPS and we preferred to investor to invest in the SCBNL than others.

Table 4.10 Comparative analysis DPS of three Insurance companies

Year ended	PICNL	EICL	NICL
04/05	0	100	10
05/06	0	100	30
06/07	0	50	10
07/08	100	6.61	0
08/09	115.78	12.50	0
$\bar{X}$	43.15	53.82	10
$\pm$	41.24	43.95	8.94
CV%	95.56	81.66	89.4

Like the lower level of EPS as comparison of commercial banks, the insurance companies has showed the same portion of dividend .PICNL declared dividend in recent years. EICL is not absence to distribute the dividend from 07/08.The average portion of dividend is recorded at highest level 53.82 of EICL as the comparison of NICL recorded at highest level 53.82 of EICL as the comparison of NICL recorded at highest level 53.82 of EICL as the comparison of NICL recorded in lowest level. PICNL is performing at satisfactory level of dividend in the following date. there is the high degree fluctuation in DPS found in PICNL with 95.56% CV .By the Cv analysis the lowest portion of cv is found in EICL .Both average is highest and coefficient variation lowest has showed the less risk to invest .NICL is in weak position to declare the dividend in five years period.

4.1.4 Analysis of DPR

Dividend payout ratio (DPR) is the ratio of DPS and EPS or DPR is found by dividing EPS to DPS .This is also a major aspects corporate dividend behavior. This ratio is indicated to management how many portion of earning distribute to dividend and others is retaining in the firm. Now, we are going to comparative study of DPR on the following.

Table 4.11 comparative analysis DPR of three commercial banks

Year ended	NIBL	SCBNL	NABIL
04/05	50	80.37	59.05
05/06	29.01	76.62	70.18
06/07	31.79	83.59	67.66
07/08	93.44	79.62	65.78
08/09	47.95	47.79	100
$\bar{X}$	50.43	73.59	72.53
±	23.07	13.09	14.21
CV%	45.74	17.78	19.59

Dividend payout ratio of three commercial banks has been seen in satisfactory performance, which is presented in table 4.11.The highest payout has been seen in the year 08/09 of NABIL .The lowest payout conduct by NIBL in the year 05/06 with payout 29.01%. The average DPR is found highest in SCBNL with 73.59 % than the lowest DPR is found NIBL of 50.43. The SCBNL has most consistent in terms of DPR. We conclude that the investment in SCBNL has better than others because of it's lower c.v. i.e. the less riskiest firm.

Table 4.12 Comparative analysis DPR of three Insurance companies

Year ended	PICNL	EICL	NICL
04/05	0	161.96	40
05/06	0	174.76	91.93
06/07	0	296.38	40.51
07/08	229.67	47.41	0
08/09	628.21	50.93	0
$\bar{X}$	171.57	146.20	34.48
±	205.86	92.14	25.97
CV%	119	63.2	75.31

The dividend payout of insurance companies have weak position as compare of commercial banks of Nepal, which is clearly presented in table 4.11 and 4.12. The highest level of payout seem in the PICNL in the year 06/07 where EPS has found only Rs 18.43 but DPS is Rs 115.78. So, it reflects the DPR at highest level at 628.21 times. Regularly , payout ratio of EICL has diminished it's CV. As compare of three insurance companies we can conclude that the average of DPR of PICNL,EICL and, NICL are 171.57, 146.2 and 34.48times respectively. In simple observation we are preferred to invest to the EICL of its lowest coefficient of variation although the average payout is high in PICNL.

4.1.5 Analysis of P/E ratio

P/E ratio is described the relationship between earning and market price per share .management ,investor and security analyst are more interested in P/E because It indicates the growth rate and trend of market price per share .Now, we are going to present the P/E ratio of Nepalese commercial Banks and insurance companies which in listed below.

Table 4.13 comparative analysis P/E Ratio of three commercial banks

Year ended	NIBL	SCBNL	NABIL
04/05	20.10	10.98	8.68
05/06	18.18	12.16	10.79
06/07	20.35	16.34	14.34
07/08	32.02	26.29	17.33
08/09	27.63	35.25	36.35
$\bar{X}$	23.65	20.20	17.49
±	5.19	9.21	9.88
CV%	21.94	45.59	56.48

In the year 04/05, the P/E ratio of NIBL, SCBNL and NABIL are 20.10, 10.98 and 8.68 times respectively. Where the highest P/E has found in NIBL .As compare of year 04/05 and 08/09, the portion of P/E ratio is increasing by high level at SCBNL and NABIL as comparison of SCBNL and NABIL has seen low level of P/E ratio. The average P/E has found in NIBL at highest level with 23.65 times. In CV analysis the most consistent firm is also NIBL So, we concluded that investing in the NIBL is better than SCBNL and NABIL in terms of P/E analysis.

Table 4.14 Comparative analysis P/E ratio of three Insurance companies

Year ended	PICNL	EICL	NICL
04/05	9.65	9.88	18.26
05/06	8.36	6.11	11.49
06/07	4.50	19.26	14.99
07/08	4.59	21.16	14.99
08/09	14.10	11.81	16.8
$\bar{X}$	8.24	13.64	15.30
±	3.56	5.69	2.26
CV%	43.20	41.71	14.77

The above table 4.14 has showed that the comparative P/E ratio of three insurance companies, where we have found least P/E ratio as compare of commercial banks which is presented in table 4.13.The lowest P/E has showed in PICNL and highest P/E observed in NICL .All of the banks i.e. PICNL, EICL and NICL has fluctuated their P/E. The highest rate of fluctuation find at PICNL in the year 07/08 to 08/09. NICL has high gap between in the year 04/05 and 05/06. The trend of P/E of EICL is most fluctuation as comparison of other two insurance companies. The average P/E ratio is lowest position of PICNL .The NICL has largest portion of average with most consistency found in the observation period. So ,we are preferred to investor that investing in NICL is more appropriate than PICNL and EICL.

4.1.6 Analysis of earning yield and dividend yield

Earning yield is the ratio of EPS and MPS or It is calculated by MPS to EPS. Dividend yield is the ratio of DPS on MPS .Dividend and earning yield is useful for evaluation of earning or return with relation to the market value of share. In most case, shareholder are more interested in the yield than others because it directly reflect to the portion of earning and dividend, which is shareholder's benefit.

Table 4.15 Comparative and aggregate analysis earning yield and dividend yield of three Commercial banks

Year ended	NIBL		SCBNL		NABIL	
	EY	DY	EY	DY	EY	DY
04/05	4.97	2.51	9.27	7.45	11.51	6.80
05/06	5.5	1.59	8.22	6.30	9.26	6.50
06/07	4.91	1.59	6.12	5.11	6.87	4.65
07/08	4.41	4.40	4.65	3.70	5.76	3.79
08/09	3.61	1.73	2.83	1.35	2.75	2.75
$\bar{X}^{z}$	4.68	2.36	6.21	4.78	7.23	4.89
±	0.63	1.07	2.33	2.11	2.99	1.55
CV%	13.46	45.33	37.52	44.14	41.35	31.69

The highest portion of earning yield has seen in the NABIL, from above table 4.15 than SCBNL and the lowest position of earning yield is seen in NABIL .The ratio of earning yield is decreasing yearly and come up 2.75% in the year 08/09. The SCBNL is also suffering from decreasing portion of earning price ratio. It is also suffering from decrease from 9.27 % to 2.83% .The stable earning has been seen in NIBL. The average earning and dividend yield are highest in NABIL .Normally, dividend yield as related the firm's earning yield. Without NIBL, the others banks has positive relationship of earning yield and dividend yield .

Table 4.16 Comparative and aggregate analysis of earning yield and dividend yield of three insurance companies

Year ended	PICNL		EICL		NICL	
	EY	DY	EY	DY	EY	DY
04/05	10.36	0	10.12	16.39	5.47	2.19
05/06	11.96	0	16.34	28.57	8.70	8
06/07	22.22	0	15.19	15.38	6.67	2.70
07/08	21.77	50	4.72	2.24	6.67	0
08/09	7.08	44.53	8.46	4.31	5.95	0
$\bar{X}^{z}$	14.67	18.90	8.96	13.37	6.69	2.578
±	6.17	18	4.2	9.48	1.1	2.43
CV%	42.05	95.23	46.87	70.90	16.44	94.25

We can clearly see on the table that reflection in the dividend yield .The highest level of earning yield and dividend yield has found in the PICNL .Where earning yield is 22.22 % in the year 06/07 and dividend yield is 50 % in 07/08. EICL is not absence to pay dividend .So, there is found the positive relation of earning yield and dividend yield .PICNL and NICL ,both are absence to pay the dividend regularly .In case of average of the earning yield of PICNL ,EICL and NICL are 14.67 ,8.96 and 6.69 .Like that the average of the dividend yield are 18.90 ,13.37 and 2.578 respectively. There is low degree of coefficient of variation has seen in case of earning yield of NICL of 16.44% but it has high degree of fluctuation on DY than EICL. The most consistent is found in terms of DY of EICL but it has high degree of fluctuation on EY. So, in simple observation we cannot give any decision by analysis of CV of DY and EY.

4.2 Factor that affect the dividend policy of a firm.

We have already studied the factor that influencing the dividend policy of a firm at theoretically but we are not observed and practicable test that those variables role to formulate the dividend policy of a firm .By the help of statistical tools i.e. correlation coefficient (r), Probable error(PE), Coefficient of determination (R^2) standard error (SEE), 't' test , regression constant (a), F-statistics, we are going to find out their relation and deviation on the dividend decision making.

4.2.1 Analysis of DPS and EPS

Is earning determinate to the portion of dividend? Dividend per share is derived from dividend by no of share outstanding to portion of dividend and Earning per share is from dividend by no of share outstanding to earning of

firm. Normally, DPS is determinate by EPS .So, we are going to study their relationship by the help of correlation and regression tools.

Table 4.17 Comparative correlation analysis between DPS and EPS of three commercial banks

Banks	Coefficient of correlation	Relationship	P.E.	Significance/ insignificance /No conclusion	't' Value
NIBL	0.67	Positive	0.16	No conclusion	-2.60
SCBNL	0.049	Positive	0.30	Insignificance	-3.54
NABIL	0.90	Positive	0.0574	significance	-7.43

[Note :- the tabulated value of $|t_{|}(n-2)|$ is 3.182 where level of significance 5% and df (5-2)=3 for two tail test]

Above table 4.17 show the relationship between DPS and EPS three commercial banks. We can see in the table that all of three banks have positive correlation between DPS and EPS. The higher level of correlation has found in NABIL with 0.90. The relationship of EPS and DPS is weak in the SCBNL. With the reliability test of correlation, there is not any conclusion found in NIBL.SCBNL's correlation (r) is insignificant only NABIL has seen the significant relation of DPS and EPS

By the help of another statistical tools testing hypothesis, we are going to test the correlation by 't' test .The computed value of 't' of NIBL, SCBNL and NABIL is -2.60,-3.54 and-7.43 respectively. Here, the tabulated value of 't' is greater than computed value 't' so ,there is no correlation between EPS and DPS.

Table 4.18 Comparative simple regression analysis between DPS and EPS (where dependent variable Dpt $_{(Dt)}$ and independent variable EPS $_{(Et)}$

Banks	Sample size	Constant(a)	Reg Coefficient(b)	Standard error	R^2
NIBL	5	1.322	0.52	8.19	0.44
SCBNL	5	0.6672	0.732	10.54	0.95
NABIL	5	3.05	0.74	16.80	0.95

The above table 4.18 tabulates the output of simple regression analysis between Dpt $_{(Dt)}$ which is dependent variable and EPS $_{(Et)}$ which is independent variable of banks that have been studies. The regression coefficient 'b' indicate that for NIBL ,one rupee increase in EPS leads to increase the rupee 0.52 in DPS of banks, The coefficient determination R^2 0.81 or 81% indicates that 81% of the DPS is influenced by EPS. The regression constant (a) indicates that influencing level of other factor than independent variable. The regression constant is quite high in SCBNL than others showed that the DPS is determinate more by other factor than EPS.

The standard error of estimate (SEE) are relatively small for all the three banks .The SEE is measured the variation in actual values from 'best fit' line of regression which in the above case of DPS and EPS. The coefficient of determination of SCBNL and NABIL 0.95 indicate that 0.95% of variation in DPS can be linked to the variation in EPS of those banks .We can conclude by the analysis of regression that the NABIL and SCBNL both have close relation of EPS and DPS but NIBL has seemed the weak relationship or little relation each.

Table 4.19 Comparative correlation analysis between DPS and EPS of three insurance companies

Insurance companies	Coefficient of correlation	Relationship	P.E.	Significance/ insignificance /No conclusion	't' Value
PICL	-0.0453	Negative	0.3018	Insignificant	-.0784
EICL	0.911	Positive	0..0514	Significant	3.82
NICL	0.76064	Positive	0.1271	No conclusion	2.0270

[Note :- the tabulated value of $|t_{|}(n-2)|$ is 3.182 where level of significance 5% and df (5-2)=3 for two tail test]

Above table 4.19 has showed that the correlation between EPS and DPS. PICNL is negative with -0.0453. And rest EICL and NICL have positive correlation .The NICL has high degree of co-relation show that close relationship between EPS and DPS. The coefficient of correlation 'r' is insignificant in PICNL means there is not any reliability in terms of EPS and DPS. The another measurement of correlation analysis of hypothesis test. We have found of the two insurance companies' population correlation is zero between EPS and DPS. Hence the tabulated value is greater than calculated value i.e. calculated 't' of PICNLand NICL are.-0.0784 and 2.0270 respectively and tabulated $|t_{|}(n-2)|$ is 3.182 .But EICL have found Some Correlation between DPS and EPS. By the relation of correlation analysis ,EPS and DPS has very weak position of three insurance company suggest that the dividend is determinate by other factors rather than EPS .i. e. the absence in declaration of dividend of insurance company is a example of not consideration of earning.

Table 4.20 Comparative simple regression analysis between DPS and EPS of three insurance companies (where dependent variable Dpt $_{(Dt)}$ and independent variable EPS $_{(Et)}$)

Insurance Companies	Sample size	Constant(a)	Reg Coefficient(b)	Standard error	R^2
PICNL	5	-9.66	1.467	26.52	0.3296
EICL	5	4.15	1.52	20.27	0.9248
NICL	5	1.71	0.37	5.77	0..50

The regression coefficient is indicated that the portion change in one variable affected to the another. In case of EICL the change in one rupee in EPS -$E_{(t)}$ cause the reflection of the change in DPS- $D_{(t)}$ of Rs 1.52 . The constant factor is indicated that the other factor is indicates that the other factor affected than the application factor. The low level of constant 'a' and low portion of coefficient 'b' indicate that the relation EPS and DPS of insurance companies. The standard error of estimate also relatively small of three insurance companies coefficient of determination R^2 of EICL has relatively high than others insurance companies .Where EICL indicates 92.48% can variation in EPS is linked the variation of DPS.

4.2.2 Analysis of cash DPS and liquidity position of a firm(Current Ratio)

A high liquidity performance firm can issue the more amt cash dividend .A low liquidity performance firm stop to pay the cash dividend or issue of stock dividend. Now, we are going to test the effect of current ratio on paying to cash dividend of Nepalese financial institution on the following.

Table 4.21 Comparative correlation analysis between cash DPS and Current ratio of three commercial banks

Banks	Coefficient of correlation	Relationship	P.E.	Significance /insignificance /No conclusion	R^2	't' Value
NIBL	-0.42	Negative	0.2491	Insignificance	0.1764	-0.8
SCBNL	0.78	Positive	0.1277	No Conclusion	0.5776	2.02
NABIL	0.1402	Positive	0.2965	Insignificance	0.0196	0.2449

[Note :- the tabulated value of $|t_{|}(n-2)|$ is 3.182 where level of significance 5% and df (5-2)=3 for two tail test]

The above table 4.21 indicates the correlation between cash DPS and current ratio. The NIBL has showed the negative relationship between cash DPS and current ratio. So, There is insignificant reliability found in the correlation coefficient (r) The cash DPS is suffering at high level in the SCBNL by current ratio. Where, there is significant of correlation with 0.78 .NIBL has positive correlation but it has very lower cause the insignificant in the reliability of correlation between cash DPS and current ratio. The coefficient of determination R^2 indicates the change in one variation effect to the other. SCBNL 0.5776 or 57.76% R^2 is linked the variation of cash DPS. High coefficient of determination is sign of higher changed of variation or higher close relationship.

The computed value of 't' has less than tabulated value of 't' so, we conclude that the population correlation is zero.By the comparative table 4.21 we can conclude that the Nepalese banks are not considered the current ratio of the firm to declaration of cash dividend.

Table 4.22 Comparative correlation analysis between cash DPS and Current ratio of three Insurance companies

Banks	Coefficient of correlation	Relationship	P.E.	Significance/ insignificance /No conclusion	R^2	't' Value
PICNL	-0.016	Negative	0.302	Insignificance	0.0256	-0.28
EICL	-	-	-	-	-	-
NICL	0.94	Positive	0.0352	Significance	0.8836	4.76

[Note :- the tabulated value of $|t_{|}(n-2)|$ is 3.182 where level of significance 5% and df (5-2)=3 for two tail test]

Above table 4.22 has showed the aggregate correlation among three insurance companies .We can see that ,the EICL has no correlation means this company is not issued any portion of cash dividend on the observation period 04/05 to 08/09. The rest companies have negative and positive correlation. PICNL has negative correlation of -0.016 and lies the insignificant position. The NICL has positive correlation of current ratio and cash DPS, also lies in the significance position. The coefficient determination r^2 indicates that the NICL has 88.36% change in variation of current ratio cause the 88.36% variation is linked in cash dividend. Like that PICNL has only 2.5% variation linked in each other.

The computed value of 't' on the PICNL and NICL have -0.28 and 4.76 respectively. Like that the tabulated value value of $|t_{|}(n-2)|$ is 3.182.So, we can conclude that the population correlation is zero PICNL but there is some correlation found in NICL because the calculated value of 't' is more than tabulated value. By the comparative table ,we conclude that the dividend practices of Nepalese insurance companies has weak position .The irregularity

and fluctuating dividend practices has shown that insurance companies are not considered the current ration to determine the portion of dividend.

4.2.3 Analysis of cash DPS and Debt Position of a firm

A high debt position of a firm may reduce the portion of dividend .If a firm need to repay debt regularly it decrease the portion of cash account of the company . So, we can say that the cash dividend and debt position has inverse relation .Now, we are going to study between cash DPS and debt position of Nepalese financial institutions by use of regression application.

4.2.3.1 Comparative analysis debt and Cash DPS of three commercial Banks

Table 4.23 Comparative regression analysis between cash DPS and debt position of Three commercial Banks (Where DPS is dependent variable and Debt is independent variable)

Banks	Sample size	Constant(a)	Reg Coefficient (b)	Standard error (SEE)	R^2
NIBL	5	-42.42	0.16	77.40	0.322
SCBNL	5	-199.55	2.36	30.84	0.4730
NABIL	5	-82.79	0.20	174.66	0.00011468

The above table 4.23 has presented the regression analysis between Cash dividend and firm's debt position .The SCBNL is more affected by debt in the determination of cash dividend i.e. the coefficient of regression (b) is indicated the level of variable factors We can easily define that the low regression coefficient cause the lower effect of debt factor to portion of cash dividend. The standard error of estimate is high in NABIL indicates the high level of fluctuation in the portion of cash DPS with debt position .The coefficient of

determination is only defined in NIBL ,SCBNL and NABIL are 32.20%,47.30% and 0.01% respectively variation cause by debt position in cash DPS. By the comparative table analysis we conclude that there is not any strong relationship between cash DPS and level of debt, sometimes the level of debt and cash DPS both are increased. The constant factor (a) has shown that the cash DPS is dominated by other factors rather than debt factor.

4.2.3.2 Comparative Analysis of cash DPS and debt of three insurance companies

PICNL and NICL both have not any debt during the observation period .So, we cannot defined their value at tabular form. We conclude that the debt factor is not major factor to determine the dividend policy because without debt position theirs' declaration of portion of cash dividend is also weak position .The another EICL has little be debt . The level of debt in the year 04/05,05/06, 06/07 and 07/08 are 16.82,0.0046,0.02 and 25 (in mi) respectively .Like that the level of cash dividend is not declared during the observation years. We can conclude that the debt factor is passive commitment to declaration of dividend by EICL's management board.

4.3 Test the reliability and superiority of cash dividend Vs stock dividend

Company earn profit and it distribute to their shareholder either cash dividend or stock dividend. We are going to study in this part the reliability and superiority of cash dividend against stock dividend by the help of financial performance of banks and insurance companies. Firstly, we test the reliability between stock dividend and cash dividend.

Table 4.24 record of portion of cash dividend and stock dividend of Bank and insurance companies:

S N	Institutions	No of Obser	Cash Dividend				Stock Dividend			
			Fr	Ratio	Ave Div	Weight	Fr	Ratio	Ave Div	Weight
1	Banks	15	15	100%	65.5%	0.97	6	40%	8.69%	0.20
2	Insurance Companies	15	3	20%	1.71%	0.03	8	53.33%	33.84%	0.80
	Total	30	18		67.21%	1	14		42.63%	1

By the above table 4.24 we are concluded that the Banks are used more portion of cash div than stock dividend. With comparison of banks, insurance companies use the stock dividend with 33.84 and cash div 1.71% .In the simple observation the weight of cash div of banks is 97% and remaining 3% is falling on the insurance companies. The weight of stock divided of banks is just 20% of banks with compare of insurance companies .We can say that there is more reliability of cash div found in banks and the more reliability of stock div found in insurance companies. There is not any strong conclusion found of banks and insurance companies in terms of average analysis of cash dividend and stock dividend. We can see that banks are not absence in pay to cash dividend i.e. frequency of cash dividend of bank is hole 15 and stock dividend is at 6 times. We can say that banks are absence to declare the stock dividend at 9 periods of observation years. Like that insurance companies has seen the poor performance in terms of declaration of dividend .Insurance companies have declared cash div at only at 3 years and issue bonus share only 8 period with weight 53.33%. Insurance companies are absence to payment cash div at 12 periods of observation years and stock dividend at 7 period.

Table 4.25 Frequency of cash dividend and stock dividend from 04/05 to 08/09

Form of Dividend	Observed Year	Below 25	Below50	Below75	Below100	Below125	Below150
Banks							
Cash div	5	5	5	9	10	14	15
Stock div	5	3	6	-	-	-	-
Insurance Companies							
Cash div	5	3	-	-	-	-	-
Stock div	5	2	3	4	4	8	-

Table no 4.25 is showed the frequency of dividend payment. On the time Banks are declared total 15 times of cash dividend and just 6 times of stock dividend. We can see that Banks are declares and pay the cash dividend 5 times between 0-25 ,4 times between 50-75, and 1 times between 75-100, 4 times between 100-125 and 1 times between 125-150 .They are declared stock dividend 3 times between 0-25 and 3 times between 25-50.

Insurance companies are showed the weak performance in that period. In that time insurance companies are declared and pay the cash dividend has just 3 times and stock dividend is at 8 times. On the times cash div is paid at 3 times between 0-25, another stock dividend is paid at 2 times between 0-25,1 times between 25-50,1 times between 50-75 and 4 times between 100-125. In a nut shell, we can say that cash dividend see more reliable towards Banks against the insurance companies' stock dividend.

The another aspects of study is which forms of dividend is superior. Now, for testing the superiority we have selected the institutions that follow

fully cash dividend or stock dividend. NABIL and EICL are followed the cash dividend and stock dividend. NABIL bank is followed the forms of cash dividend like that Everest insurance company is followed the stock dividend from the year 04/05 to 07/08.Now we are used the different financial tools to eliminate our research objectives.

Table 4.26 Comparative financial performance analysis of NABIL and EICL from 04/05 to 07/08

Year	NABIL CASH DIV	EICL STOCK DIV	EPS Growth Rate		Net worth Gr rate		DPS Growth rate		CR Growth Rate	
			NABIL	EICL	NABIL	EICL	NABIL	EICL	NABIL	EICL
04/05	50%	100%	-	-	-	-	-	-	-	-
05/06	65%	100%	9.39%	-7.32%	12.76%	-1.56%	30%	0	-4.62%	-10%
06/07	70%	50%	10.47%	-70.51%	21.90%	12.80%	7.69%	-50%	-25.24%	0
07/08	85%	6.61%	19.93%	-21.01%	-1.19%	-5.48%	21.42%	-86.78%	64.28%	12.22%

Nabil Bank is paying the dividend as cash in the year 04/05 to 07/08,which is shown in above table .It has increased at progressive form of cash dividend. Like that the EICL has diminishing percent to declaration of stock dividend. The EPS has increased NABIL at 9.39% ,10.47% and 19.93% growing rate at the year 05/06,06/07 and 07/08respectively. The another EICL has growth rate with -7.32%,-70.51% and -21.01% .So ,we can conclude that the declaration of cash dividend is more superior in terms of growth rate of EPS. The another net worth is also increased at 12.76% ,21.90% and -1.19% of NABIL at the year 05/06,06/07 and 07/08 respectively. The NABIL has increased the growth rate at 21.90% .When its dividend rate is increased by 15% ,Like that the EICL has increased the net worth at -1.56% ,12.80% and 5.48% in the year 05/06.06/07 and 07/08 respectively. The EICL declares when

100% stock dividend and in the year 06/07 it has increased the net worth by 14.36%.When it reduce the stock dividend at 50% that caused at 07/08 with negative growth rate ,which is decreased by 18.28%.In the net worth point of view again cash dividend is more superior cause the DPS of NABIL is increased by 30% in the year 05/06 than reduce at 22.31% in 06/07.Again it make up its DPS by 21.42% with compare of NABIL.EICL has no increased of its stock DPS in 05/06 and rest year 06/07and 07/08 have decreased by 50% and 36.78% respectively. So ,we conclude that cash dividend is more superior .The next current ratio is a major indicator of declaration of dividend .NABIL has decreased its current ratio at 4.62% and 20.62% in the year 05/06 and 06/07 than it has increased at large percent of 89.52% in the year 07/08.Like that EICL has increased of current ratio by 10% and in the year 06/07.It has no changed current ratio rest year 07/08 and it has increased by 12.22%. The Nabil Bank has also superior performance in the current ratio maintaining as compare of Everest insurance company. So, we can conclude that cash dividend again best against the stock dividend.

4.4 Hypotheses test:

4.4.1 1st hypothesis test :

Null hypothesis H_o : $\mu_1 = \mu_2$ ie there is no significance difference in yearly average DPS between banks and insurance companies.

Alternative hypothesis: H_1 : $\mu_1 \neq \mu_2$ i.e. there is significance difference between yearly average DPS between banks and insurance companies.

Test Statistics:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{SP^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{74.19 - 35.65}{\sqrt{136.35\ \left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{38.54}{\sqrt{136.35\ x.40}}$$

$$= \frac{38.54}{\sqrt{54.54}} \quad = \frac{38.54}{7.38} = 5.22$$

Critical Value : The tabulated value of t at 5% level of significance with 8 df is 2.306.

Decision: Since calculated value of t is greater than tabulated value .Hence H_o is rejected so we conclude that there is significance different yearly average between banks and insurance companies.

4.4.3 2nd hypothesis test:

Null hypothesis: H_o : $\mu_1 = \mu_2$ i.e. there is no significance different yearly average DPR of banks and insurance companies.

Alternative hypothesis: H_1 : $\mu_1 \neq \mu_2$ i.e there is significance difference yearly average DPR of banks and insurance companies.

Test statistics:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{SP^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{65.52 - 117.448}{\sqrt{2015 \times 0.40}} = \frac{-51.928}{\sqrt{806}} = \frac{-51.928}{28.39} = -1.82$$

$\ldots / t / = 1.82$

Critical value : The tabulated value of t at 5% level of significance at 8 df is 2.306

Decision: Since, the calculated value of t is less than tabulated value .Hence H_o is accepted. So, we conclude that there is not significance difference in yearly average DPR of banks and insurance companies.

4.4.3 3rd hypothesis test

Null Hypothesis : $H_o: \mu_1 = \mu_2 = \mu_3$ i.e. there is not significance in the DPS of three commercial banks Alternative hypothesis: $H_1: \mu_1 \neq \mu_2 \neq \mu_3$ i.e. there is significance in the DPS of three commercial banks.

Table 4.27 Yearly DPS of three commercial banks

Year	NIBL DPS	SCBNL DPS	NABIL DPS
04/05	19.90	120	50
05/06	15	110	65
06/07	12.50	120	70
07/08	55.46	140	85
08/09	30	80	140

Table 4.28 ANOVA Table

Source of variation	Sum squares	d. f.	Mean Sum squares	F-ratio
Between sample	19566.53	3-1=2	$= \frac{19566.53}{2}$ =9783.26	F= $\frac{MSB}{MSE}$ = $\frac{9783.26}{664.39}$ =14.72
Within sample(error)	7972.72	15-3=12	$= \frac{7972.72}{12} X 664.39$	
Total	27539.25	15-1=14		

Critical value : The tabulated value of F at 5% level of significance for (2,12) d f is 3.89.

Decision: Since ,the calculated value of F is greater than tabulated value .Hence : H_o is rejected so, we conclude that there is significance different the DPS of three commercial banks (NIBL,SCBNL and NABIL)

4.4.4 4th hypothesis test

Null hypothesis $H_o: \mu_1 = \mu_2 = \mu_3$ i.e. there is not significance the DPS of three insurance companies .

Alternative Hypothesis: $H_1: \mu_1 \neq \mu_2 \neq \mu_3$ i.e. there is significance different the DPS of three insurance companies

Table 4.29 Yearly DPS of three Insurance Companies

Year	PICNL DPS	EICL DPS	NICL DPS
04/05	0	100	10
05/06	0	100	30
06/07	0	50	10
07/08	100	6.61	0
08/09	113.78	12.50	0

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Table 4.30 ANOVA Table

Source of variation	Sum squares	d.f.	Mean Sum squares	F-ratio
Between sample	5222.38	3-1=2	$=\frac{5222.38}{2}=2611.19$	$F=\frac{MSB}{MSE}$ $=\frac{2611.19}{1909.06}$ =1.3677
Within sample(error)	22908.74	15-3=12	$=\frac{22908.74}{12}$ X1909.06	
Total	28131.12	15-1=14		

Critical value : The tabulated value of F at 5% level of significance for (2,12) d f is 3.89.

Decision: Since the calculated value of is less than critical value .Hence H_o is accepted .We can conclude that there is no significance difference in the DPS of three insurance companies

CHAPTER - V

FINDING , RECOMMENDATIONS, SUMMARY AND CONCLUSION

5.1 Finding

Various data are analysis in the chapter IV by use of different statistical and non statistical tools. These are the major finding on the basis of the study, which is listed below.

Major finding:

- Nepalese banks are followed the portion of cash dividend rather than stock dividend.
- Nepalese insurance companies are followed the portion of stock dividend rather than cash dividend.
- These are not a strong dividend policy which is followed by Nepalese insurance companies.
- Banks are trying to maintain the portion of dividend stable with regular.
- The insurance committee's rules and regulation is constrained to pay the cash dividend by insurance companies.
- SCBNL and EICL are strongly posed to declare and payment of dividend rather than other banks and insurance companies.
- SCBNL has highest level of EPS with lowest CV
- EICL has highest level of EPS with average Rs 34.86.
- SCBNL has highest DPR with lowest CV.
- PICNL has highest level of DPR but EICL has lowest level of CV.
- NIBL has highest P/E multiple with lowest CV

- NIBL has highest level of P/E multiple with lowest CV and dividend yield of banks insurance companies.
- NABIL has highest EY and DY
- PICNL has highest EY and DY.
- The portion of dividend of Nepalese Banks is more affected by EPS rather than others factor.
- The NABIL has high level of coefficient of correlation (r) and significant relationship between DPS and EPS.
- SCBNL has positive but insignificant relationship between DPS and EPS.
- PICNL has negative relationship between DPS and EPS.
- EICL and NICL has positive relationship between DPS and EPS but there is not any conclusion found in the relationship validity.
- SCBNLs' dividend is more affected by liquidity position of firm with significant relationship.
- NIBL has negative and NABIL has positive relationship between cash DPS and current ratio with insignificant relationship.
- EICL has not cash dividend declared on the following period.
- NICL has positive relationship of cash DPS and liquidity position of firm with significant relationship.
- PICNL has negative correlation with -0.016.
- The SCBNL has high portion of dividend affected by debt factor.
- NIBL has low portion of dividend affected by debt factor.

- There is not any debt in PICNL and NICL .Only EICL has little be debt on the observation period.
- The debt factor is passive commitment to declaration of dividend by EICLs' management board.
- The cash dividend is more reliable in banks than stock dividend.
- 33.94% average level of stock dividend of insurance companies suggest that there is high portion of stock dividend followed by Nepalese insurance companies.
- The stock dividend is more reliable in insurance companies by frequency and average level of cash and stock dividend's test.
- Superiority seems of cash dividend against stock dividend by the study of growing rate of EPS, Net worth, DPS and current ratio of NABIL and EICL.
- There is significance different yearly average of DPS and EPS but insignificance in DPR between banks and insurance companies.
- Banks DPS is significance but insurance companies DPS is insignificance relationship in each.

5.2 Recommendations:

- **Stockholder**

Dividend is the mostly concern towards the stockholders .Nepalese stockholders are unknown about the best forms of dividend. After this study we can declare that cash dividend is more reliable with superior in the strong financial company like that developing country like Nepal. With the investment opportunities retaining policy is best as compare of distributing .

- **Board of directors:**

Board of directors are declared the dividend and company General assembly approved it. We should recommend to Nepalese board of director to make a constant dividend policy and build the dividend policy like reinvestment with a growing small capital market

- **Customer:**

Customers are not another well known public and service holder of the company. Dividend policy is not directly affected them but indirectly they are also concerned. The policy of reinvesting for company enlargement should beneficial to the possible customer

- **Government:**

Governments are policy maker or regularity body. In the time of inflation, unpleasant investment opportunities the government's dividend should be flexible but when there is good investment environment the policy should be reinvesting or retaining not distribution as dividend

- **Managers and Staffs:**

Manager wants to more compensation from the company So, we recommended that the policy should flexible and forwarded for the manager's and staff's other facilities like managers car, staff's lodge and food facilities .The Shareholder should be cut off their income and use of the manager and staff's compensation.

- **Loan holders:**

Loan holder wants to regular interest as income .After paying the interest then the profit is distribution .Loan holder are become cleaver from

the company's bankruptcy and liquidation. The reinvesting or bonus share issue is a good policy to the loan holder's point of view

- **NEPSE and SEBON:**

The irregular dividend, gap of public and private sector's dividend policy is the main obstacles of formulating of dividend policy. Nepal stock exchange has making a trading floor and regulation of security exchange of Nepal like SEBON (Security board of Nepal) Should provide the information about the condition of security market of Nepal so, both NEPSE and SEBON are required to make a suitable dividend policy for both public and private sector.

- **TU, Collage& Other research centre:**

Dividend study is not an old phenomenon of Nepal. For research purpose TU should be make a plan to student as library management ,field visit and make the environment of group discussion .The few research centre are also actively presented the condition of dividend practice of both public and private sector of Nepal.

5.3 Summary & Conclusion

This is the study on the topic of **"**A comparative study and analysis of dividend policy of Nepalese financial institutions (with reference to commercial Banks and Insurance Companies of Nepal)" has come with broad objective .Yet the study is forwarded for final examination ,it has given us the remedial measure towards the policy problem on the issue of dividend distribution of Nepalese financial institutions. There are the main three aspects of the study .

- First is the dividend practice of Nepalese financial institution ,the second is factor that affect the dividend policy of a firm and the third aspects is reliability and superiority of cash dividend Vs stock dividend. Commercial Banks are posed strongly rather than insurance companies. Like that the commercial banks are trying to regular and stable dividend but insurance companies are absence in most time show the weak financial performance. Nepalese Banks are declared and payments the cash dividends in most case but insurance companies are issue of stock dividend because their financial position constraints.
- Liquidity position, legal rule, desire of share holders ,tax rate, profit rate, GDP rate etc are affect the portion and stability of dividend .Some factor are easily measurement but some are hard for estimated or projected for dividend declared. We can also say that Nepalese firm are not many consideration of various factors like liquidity position ,profit rate and past earning etc but desire of shareholders ,legal constraint play the dominant role.
- One of the most important question arise at the time of dividend payment that which forms of dividend is reliable with superior? The comparative study of cash Vs Stock dividend suggests that with the strong financial performance companies issue cash dividend and a weak financial firm declared the stock dividend .After declaration of cash dividend market price of share is decreased but by issue of stock dividend the equity capital is increased .
- At last, Due to the lack of dividend study of Nepalese financial institutions, It is also become a subject matter for the further researcher to eliminate the policy problem on the context of dividend of Nepalese financial area.

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Annex -4.2.1

Analysis of DPS and EPS-NIBL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
19.99	39.56	399.60	1564.99	790	-6.6	-10.94	72.20	43.56	119.68
15	51.70	225	2672.89	775.50	-11.59	1.2	-13.90	134.32	1.44
12.50	39.31	156.25	1545.27	491.37	-14.09	-11.19	157.66	198.52	125.21
55.46	59.35	3075.51	3522.42	3291.55	28.87	8.85	255.49	833.47	78.32
30	62.56	900	3917.75	1876.80	3.41	12.06	41.12	11.62	145.44
$\sum X_1$ =132.95 $\sum \overline{X_1}$ =26.59	$\sum X_2$ = 252.50 $\sum \overline{X_2}$ =50.50	$\sum X_1^2$ =4756.36	$\sum X_2^2$ =13219.32	$\sum X_1 X_2$ =7225.22	$\sum x$ =0	$\sum x_2$ =-0.02	$\sum x_1 x_2$ =512.57	$\sum x_1^2$ =1221	$\sum x_2^2$ =470.09

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{512.57}{\sqrt{1221}\sqrt{470.09}}=\frac{512.57}{34.94 X 21.68}=\frac{512.57}{757.49}=0.67$$

$r^{2=}0.44$

$$PE=0.6745\frac{1-r^2}{\sqrt{n}}=0.6745\frac{1-0.44}{\sqrt{5}}=0.6745\times\frac{0.56}{2.23}=0.1693$$

r>6PE 0.67>6X0.1693 0.67>1.01 0.16>0.67>1.01 = (No conclusion)

Simple Regression between DPS(X_1)and EPS (X_2

$Y=a+ bX$……(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

Where dependent variable X_1 in independent variable X_2

$\sum X_1 = a + b\sum X_2$

$132.95=a+ b\ 252.50$

$\cdots a+ 252.50\ b =132.95$……(.i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

$7225.22=a252.50+b13223.32$

$252.50a+b13223.32=7225.22$……(ii)

$252.50a + 63756.25b= 33569.875$

$252.50+13223.32b= 7225.22$

$50532.93b=26344.65$

$b=0.5213$

a+ 252.50x0.5213=132.95

a=1.322

$b_{yx} = \frac{XY}{X^2} = \frac{7225.22}{4756.36} = 1.5$ $b_{xy} = \frac{XY}{Y^2} = \frac{7225.22}{13223.32} = 0.0546$

$R^2 = b_{yx} \times b_{xy} = 1.5 \times 0.00546 = 0.081$ $r = \sqrt{0.081} = 0.284$

$$t = \frac{\overline{X}_1 \; Z \; \overline{X}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} \Gamma \frac{1}{n_2}\right)}} = \frac{26 \; .59 \;\; Z \; 50 \; .50}{\sqrt{211 \;\; \left(\frac{1}{5} \Gamma \frac{1}{5}\right)}} = \frac{Z \; 23 \; .91}{\sqrt{84 \; .4}} = \frac{Z \; 23 \; .91}{9 \; .18} \; Z \; 2 \; .60$$

$$SP^2 = \frac{1}{n_1 \Gamma n_2 \; Z2} \quad (X_1 - \overline{X}_1)^2 + \quad (X_2 - \overline{X}_2)^2 = \frac{1}{5 \; \Gamma 5 \; Z2} (1221 \; \Gamma 470.09) = 211$$

Annex -4.2.1

Analysis of DPS and EPS-SCBNL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$	$x_1 x_2$	x_1^2	x_2^2
120	149.30	14400	22290	17916	6	-6.62	-39.72	36	43.82
110	143.55	12100	20606	15790	-4	-12.37	49.48	16	153
120	143.55	14400	20606	17226	6	-12.37	-74.22	36	153
140	175.83	19600	30916	24616	26	19.91	517.66	676	396
80	167.37	6400	28012	13389.60	-34	11.45	-389.30	1156	131.10
$\sum X_1$ =570 $\sum \overline{X_1}$ =114	$\sum X_2$ = 779.60 $\sum \overline{X_2}$ =155.90	$\sum X_1^2$ =66900	$\sum X_2^2$ =122430	$\sum X_1 X_2$ =88937.60	$\sum x$	$\sum x_2$	$\sum x_1 x_2$ =63.9	$\sum x_1^2$ =1920	$\sum x_2^2$ =876.92

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{63.90}{\sqrt{1920}\ \sqrt{876.92}}=\frac{63.90}{43.81 X\ 29.61}=\frac{63.90}{1297.21}=0.049$$

…$r^{2=}0.00241$

$$PE=0.6745\frac{1-r^2}{\sqrt{n}}=0.6745\frac{1-0.0024}{\sqrt{5}}=0.6745X\frac{0.9976}{2.23}\quad X0.30$$

Regression equation DPS(X 1) on EPS (X2)

$\sum X_1 = a + b\sum X_2$

570 = a + b 779.60……..(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

88937.60=a 779.60 +b12243.70. ……(ii)

779.60a + 607776.16b =444372

779.60a +122430.7b =88937.60

485346 b =355434.40

b=0.732

$SE = \frac{1}{n} \quad (X_1 - \overline{X}_1)(X_2 - \overline{X}_2) = \frac{1}{5} X\, 63.90 = 12.78$

$b_{yx} = \frac{X_1 X_2}{X_1^2} = \frac{88937.60}{66900}$ X1.32 $\quad b_{xy} = \frac{X_1 X_2}{X_2^2} = \frac{88937.60}{122430}$ X0.72

$r^2 = b_{yx} \text{ x } b_{xy}$ =1.32X0.72= 0.95

$$t=\frac{\overline{X}_1 \; Z \; \overline{X}_2}{\sqrt{SP^2\left(\frac{1}{n_1} \; \Gamma \; \frac{1}{n_2}\right)}}=\frac{114 \quad Z\,155 \quad .92}{\sqrt{349 \quad .61\left(\frac{1}{5} \; \Gamma \; \frac{1}{5}\right)}}=\frac{Z\;41\;\;.92}{\sqrt{139\;\;.84}}=\frac{Z\;41\;\;.92}{11\;\;.82}\;\;X\;\;Z3\,.54$$

$$SP^2=\frac{1}{n_{1\Gamma}n_2\;Z2}\qquad(X_1-\overline{X}_1)^2+\qquad(X_2-\overline{X}_2)^2=\frac{1}{5\,\Gamma\,5\;Z2}(1920\,\Gamma\,876.92)=349.61$$

Annex -4.2.1

Analysis of DPS and EPS-NABIL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}_1$)	x_2= ($X_2 - \overline{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
50	84.66	2500	7167	4233	-32	-25.32	810.24	1024	641.10
65	92.61	4225	8576.61	6019.65	-17	-17.37	295.29	289	301.71
70	103.45	4900	10701.90	7241.50	-12	-6.53	78.36	144	42.64
85	129.21	7225	16695.20	10982.85	3	19.23	57.69	9	369.79
140	140	19600	9600	19600	58	30.02	1741.16	3364	901.20
$\sum X_1$=410 $\sum \overline{X_1}$=82	$\sum X_2$ =549.93 $\sum \overline{X_2}$ =109.98	$\sum X_1^2$ =38450	$\sum X_2^2$ =62470	$\sum X_1 X_2$ =48077	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =2982.74	$\sum x_1^2$ =4830	$\sum x_2^2$ =2256.44

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{2982.74}{\sqrt{4830}\ \sqrt{2256.44}}=\frac{2982.74}{69.49X47.50}=\frac{2982.74}{3300.775}\ X0.90$$

$$PE=0.6745\frac{1-r^2}{\sqrt{n}}=0.6745\frac{1-0.90^2}{\sqrt{5}}=0.6745X\frac{0.19}{2.23}\quad=0.0574$$

r> 6PE (Significant)

$$b_{yx}=\frac{X_1 X_2}{X_1^2}\quad X\frac{48077}{38450}\ X1.25\qquad b_{xy}=\frac{X_1 X_2}{X_2^2}=\frac{48077}{62740}\quad X0.76$$

$r^2 = b_{yx} \times b_{xy} = 1.25 \times .76 = 0.95$

Regression Constant

$\sum X_1 = a + b \sum X_2$

$410 = a + b\ 549.93$ ……(i)

$\sum X_1 X_2 = a \sum X_2 + b \sum X_2^2$

$48077 = a\ 54993 + b\ 62740$

$54993\ a + 62740\ b = 48077$……(ii)

~~$54993a$~~ $+30242300.49b = 22547130$

~~$54993a$~~$+62740b = 48077$

$30179560.49b = 22499053$

$b = 0.74$, $a = 3.05$

$SE = \frac{1}{n} (X_1 - \overline{X}_1)(X_2 - \overline{X}_2) \times \frac{1}{5} 2982.74 \times 596.50$

$SP^2 = \frac{1}{n_1 \Gamma n_2 Z 2} (x_1 Z x_1)^2 + (x_2 Z x_2)^2 = \frac{1}{5 \Gamma 5 Z 2} (4830) + (2256.44) = 885.80$

$$t=\frac{\bar{x}_1 \; Z\bar{x}_2}{\sqrt{sp^2(\frac{1}{n_1}\;\Gamma\frac{1}{n_2})}}=\frac{Z139.93}{\sqrt{354.32}}=-7.43$$

SEE=

$$\sqrt{\frac{\pm^2_1}{n_1}+\frac{\pm^2_2}{n_2}}$$

NIBL

$$\sqrt{\frac{9.60^2}{5}+\frac{15.62^2}{5}}$$

=8.19

SCBNL

$$\sqrt{\frac{13.24^2}{5}+\frac{19.59^2}{5}}$$

=10.54

NABIL

$$\sqrt{5\quad\frac{21.24^2}{5}\quad\_\_\_\_}\qquad+\qquad 31.3^2$$

=16

Annex -4.2.1

Analysis of DPS and EPS -PICNL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}$	$x_1 x_2$	x_1^2	x_2^2
0	19.90	0	396.01	0	-43.15	-10.83	467.31	1861.92	117.28
0	25.13	0	631.51	0	-43.15	-5.6	241.64	1861.92	31.36
0	46.68	0	2179	0	-43.15	15.95	-668.24	1861.92	254.40
100	43.54	10000	1895.73	4354	56.85	12.81	728.24	3231.90	164
115.78	18.43	13405	339.66	2133.82	72.63	-12.3	-893.34	5175.11	151.29
$\sum X_1$ =215.78 $\sum \overline{X_1}$ =43.15	$\sum X_2$ =153.68 $\sum \overline{X_2}$ =30.78	$\sum X_1^2$ =23405	$\sum X_2^2$ =5441.91	$\sum X_1 X_2$ =6487.82	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =-	$\sum x_1^2$ =14092.	$\sum x_2^2$ =718.3

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{Z144.39}{\sqrt{13992.77}\sqrt{718.33}}=\frac{Z144.39}{118.29 X 26.80}=\frac{Z144.39}{3170.17} X Z0.0453$$

$$PE=0.6745\frac{1 Z r^2}{\sqrt{n}}=0.6745\frac{1 Z(Z0.0453)^2}{\sqrt{5}}=0.6745X\frac{1 Z.002052}{2.23}=0.6745X\frac{.997948}{2.23}=0.3018$$

here r< P.E … Insignificant

$$t=\frac{r}{\sqrt{1 Z r^2}} X \sqrt{n Z 2}=\frac{Z0.453}{\sqrt{1 Z 0.0453^2}} X \sqrt{5 Z 2}=\frac{Z0.0453}{\sqrt{1 Z 0.002052}} X \sqrt{3}=\frac{Z0.0453}{\sqrt{0.9979}} X 1.73$$

=-0.0784

Regression Equation $DPS(X_1)$ on $EPS(X_2)$

$\sum X_1 = a + b\sum X_2$

215.78 =a + b 153.68

a+153.68 b=215.78…….(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

6487.82=a 153.68+b5441.91

153.68a + 5441.91b = 6487.82…….(ii)

153.68a + 5441.91b =6487.82

153.68a +23617.54b=33161

18175.63b=26673.18

b=1.467

a+153.68X1.467

a=-9.66

$b_{yx} = \frac{X_1 X_2}{X_1^2}$ X$\frac{6487.82}{23405}$ X0.277 $b_{xy} = \frac{X_1 X_2}{X_2^2} = \frac{6487.82}{5441.91}$ X1.19

$r^2 = b_{yx} \times b_{xy} = 0.3296$

SEE =

$$\sqrt{\frac{\pm^2_1}{n_1} + \frac{\pm^2_2}{n_2}}$$

$$= \sqrt{\frac{52.90^2}{5} + \frac{11.98^2}{5}} = \sqrt{559.68+143.64} = 26.52$$

Annex -4.2.1

Analysis of DPS and EPS -EICL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
100	61.74	10000	3811.8	6174	46.18	26.88	1241.31	2132.59	722.53
100	57.22	10000	3274	5722	46.18	22.36	1032.58	2132.59	499.9
50	16.87	2500	284.59	843.50	-3.82	17.36	68.72	14.59	323.6
6.61	13.94	43.69	194.32	92.14	-47.21	-17.99	987.63	2228.78	437.60
12.50	24.54	156.25	602.21	306.75	-41.32	-20.92	426.42	1707.34	106.50
$\sum X_1$=269.11 $\sum \overline{X_1}$=53.82	$\sum X_2$=174.31 $\sum \overline{X_2}$=34.86	$\sum X_1^2$ =22699.94	$\sum X_2^2$ =8166.92	$\sum X_1 X_2$ =13138.39	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =3756.66	$\sum x_1^2$ =8215.89	$\sum x_2^2$ =2067.89

$$r=\frac{X_1X_2}{\sqrt{X_1^2}\sqrt{X_2^2}}=\frac{3756.66}{\sqrt{8215.89}\sqrt{2067.89}}=\frac{3756.66}{90.64X45.47}=\frac{3756.66}{4121.40}=0.911 \quad r^2=0.8299$$

$$PE=0.6745\frac{1-r^2}{\sqrt{n}}=0.6745\frac{1-0.911^2}{\sqrt{5}}=0.6745X\frac{1-0.8299}{2.23}=0.6745X\frac{.1701}{2.23}=0.0.514$$

r> 6PE (Significant)

$$t=\frac{r}{\sqrt{1-r^2}}X\sqrt{n-2}=\frac{0.911}{\sqrt{1-0.8299}}X\sqrt{5-2}=\frac{0.911}{\sqrt{0.1701}}X1.73=\frac{0.911}{0.41243}X1.73=3.82$$

Regression equation $DPS(X_1)$ on $EPS(X_2)$

$\sum X_1 = a + b\sum X_2$

$269.11 = a + b174.31$

$a + 171.31b = 269.11$…….(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

$13138.39 = a174.31 + b8166.90$……..(ii)

$174.31a + 8166.90b = 13138.39$

$174.31a + 30383.97b = 46908.56$

$22217.04b = 33770.17$

$b = 1.52$

$a + 174.31b = 269.11$

$a = 4.15$

$$SEE = \sqrt{\frac{\pm_1^2}{n_1} \Gamma \frac{\pm_2^2}{n_2}} = \sqrt{\frac{40.53^2}{5} \Gamma \frac{20.33^2}{5}} = \sqrt{\frac{1642.68}{5} \Gamma \frac{413.30}{5_2}} = \sqrt{\frac{328.536}{5} \Gamma \frac{82.66}{5}} = \sqrt{411.196} = 20.27$$

$b_{yx} = \frac{X_1 X_2}{X_1^2}$ X $\frac{13138.39}{22699.94}$ X0.578 $b_{xy} = \frac{X_1 X_2}{X_2^2} = \frac{13138.39}{8166.90}$ =1.60

$r^2 = b_{yx} \times b_{xy}$ =0.9248

Annex -4.2.1

Analysis of DPS and EPS -NICL

DPS(X_1)	EPS(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$	$x_1 x_2$	x_1^2	x_2^2
10	24.97	100	623.50	249.70	-10	-1.13	11.30	100	1.27
30	32.63	900	1064.7	978.90	20	6.53	130.60	400	42.64
10	24.68	100	609.10	246.80	-10	-1.42	14.20	100	2.01
0	27.01	0	729.50	0	0	.90	0	0	0.81
0	21.25	0	451.56	0	0	-4.85	0	0	23.52
$\sum X_1$ =50 $\sum \overline{X_1}$ =10	$\sum X_2$ =130.50 $\sum \overline{X_2}$ =26.10	$\sum X_1^2$ =1100	$\sum X_2^2$ =3478.36	$\sum X_1 X_2$ =1475.40	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =156.10	$\sum x_1^2$ =600	$\sum x_2^2$ =70.25

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{156.10}{\sqrt{600}\sqrt{70.25}}=\frac{156.10}{24.49X8.38}=\frac{156.10}{205.22}X0.76064 \quad r^2=0.57857$$

$$PE=0.6745\frac{1Zr^2}{\sqrt{n}}=0.6745\frac{1Z0.57857}{\sqrt{5}}=0.6745X\frac{0.42143}{2.236}=0.1271$$

PE<r<6PE(NoConclusion)

$$t=\frac{r}{\sqrt{1Zr^2}}X\sqrt{nZ2}=\frac{0.76064}{\sqrt{1Z0.57857}}X\sqrt{5Z2}=\frac{0.76064}{\sqrt{0.42143}}X1.73=\frac{0.76064}{0.64917}X1.73=2.0270$$

Regression equation $DPS(X_1)$ on $EPS(X_2)$

$\sum X_1 = a + b\sum X_2$

50=a+b130.50

a+ 130.50b=50……(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

1475.40=a130.5+b3478.36

130.5a+3478.36b=1475.40……(ii)

~~130.50~~a+3478.36b=1475.40

~~130.50~~a+17030.25b=6525

— — —

13551.89b=50496.60

b=0.37

a+130.50b=50

a=1.71

$$SEE=\sqrt{\frac{\pm_1^{\,2}}{n_1}\Gamma\frac{\pm_2^{\,2}}{n_2}}=\sqrt{\frac{10.95^2}{5}\Gamma\frac{3.74^2}{5}}=\sqrt{\frac{23.98}{5}\Gamma\frac{2.79}{5_2}}=\sqrt{26.77}=5.77$$

$$b_{yx}=\frac{X_1X_2}{X_1^{\,2}}\quad X\frac{1475.40}{1100}\ X1.34\qquad b_{xy}=\frac{X_1X_2}{X_2^{\,2}}=\frac{1475.40}{3478.36}\quad X0.424$$

$$r^2=\ b_{yx}\ x\ b_{xy}=0.568$$

Annex -4.2.2

Analysis of Cash DPS and Current Ratio -NIBL

Cash DPS(X_1)	CR(X_2)	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$	$x_1 x_2$	x_1^2	x_2^2
19.99	2.13	5.49	-1.55	-8.50	30.14	2.40
15	2.40	0.5	-1.28	-0.64	0.25	1.63
12.50	1.76	-2	-1.92	3.84	4	3.68
20	5.50	5.5	1.82	10.01	30.25	3.31
5	6.61	-9.5	2.93	-27.83	90.25	8.58
$\sum X_1$=72.40 $\sum \overline{X_1}$ =14.50	$\sum X_2$ =18.4 $\sum \overline{X_2}$ =3.68	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ = -23.12	$\sum x_1^2$ =154.89	$\sum x_2^2$ =19.6

$$r = \frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}} = \frac{Z23.12}{\sqrt{154.89}\sqrt{19.6}} = \frac{Z23.12}{12.44X4.42} = \frac{Z23.12}{54.98} \; X Z0.42 \quad r^2$$

=0.1764

$$PE = 0.6745\frac{1 Z r^2}{\sqrt{n}} = 0.6745\frac{1 Z 0.1764}{2.23} = 0.2491$$

r< PE …Insignificant

$$t = \frac{r}{\sqrt{1 Z r^2}} X \sqrt{n Z 2} = \frac{Z0.42}{\sqrt{1 Z 0.1764}} X \sqrt{5 Z 2} = \frac{Z0.42}{\sqrt{0.8236}} X 1.73 = \frac{Z0.42}{0.9075}$$

X1.73=-0.80

Annex -4.2.2

Analysis of Cash DPS and Current Ratio -SCBNL

Cash DPS(X_1)	CR(X_2)	x_1= ($X_1 - \bar{X}_1$)	x_2= ($X_2 - \bar{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
110	3.61	2	-0.65	1.3	4	0.4225
110	4.30	2	0.04	0.08	4	0.0016
120	3.75	12	-0.51	-6.12	144	0.26
130	7.05	22	2.79	61.38	484	7.78
70	2.63	-38	-1.63	61.94	1444	2.65
$\sum X_1$ =540 $\sum \bar{X}_1$ =108	$\sum X_2$ =21.34 $\sum \bar{X}_2$ =4.26	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =115.98	$\sum x_1^2$ =2080	$\sum x_2^2$ =11.11

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{115.58}{\sqrt{2080}\sqrt{11.11}}=\frac{115.98}{45.60X3.30}=\frac{115.98}{151.84}X0.76 \quad r^2=0.5776$$

$$PE=0.6745\frac{1Zr^2}{\sqrt{n}}=0.6745\frac{1Z0.5776}{2.23}=0.6745\frac{0.4224}{2.23}=0.1277$$

PE<r<6pe (No Conclusion)

$$t=\frac{r}{\sqrt{1Zr^2}}X\sqrt{nZ2} \quad =\frac{0.76}{\sqrt{1Z0.5776}}X\sqrt{5Z2} \quad =\frac{0.76}{\sqrt{0.4224}}X1.73 \quad = \quad \frac{0.76}{0.649}$$

X1.73=2.02

Annex -4.2.2

Analysis of Cash DPS and Current Ratio -NABIL

Cash DPS(X_1)	CR(X_2)	x_1= ($X_1 - \overline{X}_1$)	x_2= ($X_2 - \overline{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
50	2.16	-24	0.10	-2.4	576	0.01
65	2.06	-9	0	0	81	0
70	1.54	-4	-0.52	2.08	16	0.2704
85	2.53	11	0.47	5.17	121	0.22
100	2.02	26	-0.04	-1.04	676	0.0016
$\sum X_1$ =370 $\sum \overline{X_1}$ =74	$\sum X_2$ =10.31 $\sum \overline{X_2}$ =2.06	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ = 3.81	$\sum x_1^2$ =1470	$\sum x_2^2$ =0.502

$$r = \frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}} = \frac{3.81}{\sqrt{1470}\sqrt{0.502}} = \frac{3.81}{38.34 X 0.705} = \frac{3.81}{27.16} X 0.1402 \quad r^2$$

=0.0196

$$PE = 0.6745 \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \frac{1 Z .0196}{2.23} = 0.2965$$

r< PE ⋯ Insignificant

$$t = \frac{r}{\sqrt{1 Z r^2}} X \sqrt{n Z 2} = \frac{0.1402}{\sqrt{1 Z 0.0196}} X \sqrt{5 Z 2} = \frac{0.1402}{\sqrt{0.9804}} X 1.73 = \frac{0.1402}{0.9901}$$

X1.73=0.2449

Annex -4.2.2

Analysis of Cash DPS and Current Ratio -PICNL

Cash DPS(X_1)	CR(X_2)	$x_1 = (X_1 - \overline{X}_1)$	$x_2 = (X_2 - \overline{X}_2)$	$x_1 x_2$	x_1^2	x_2^2
0	1.57	-1.156	0.27	-0.31	1.336	0.0729
0	0.93	-1.156	-0.37	0.42	1.336	0.1369
0	1.26	-1.156	-0.04	0.046	1.336	0.6016
0	1.55	-1.156	0.25	-0.289	1.336	0.0625
5.78	1.23	4.624	-0.07	-0.3236	21.38	0.0049
$\sum X_1 = 5.78$ $\sum \overline{X_1} = 1.156$	$\sum X_2 = 6.54$ $\sum \overline{X_2} = 1.30$	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2 =$ -.4566	$\sum x_1^2$ =26.724	$\sum x_2^2$ =0.2788

$$r = \frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}} = \frac{Z0.4566}{\sqrt{26.724}\sqrt{0.2788}} = \frac{0.4566}{5.16 X 0.528} = \frac{Z.04566}{2.724} X Z0.16 \quad r^2$$

$=0.0256$

$$PE = 0.6745 \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \frac{1 Z.000256}{2.23} = 0.302$$

$r < PE$ ⋯ Insignificant

$$t = \frac{r}{\sqrt{1 Z r^2}} X \sqrt{n Z 2} \qquad = \frac{Z0.16}{\sqrt{1 Z 0.000256}} X \sqrt{5 Z 2} \qquad = \frac{Z0.016}{\sqrt{0.9997}} X 1.73 \qquad =$$

$$\frac{Z0.16}{0.9998} X 1.73 = -0.276$$

Annex -4.2.2

Analysis of Cash DPS and Current Ratio -NICL

Cash DPS(X_1)	CR(X_2)	x_1= ($X_1 - \overline{X}_1$)	x_2= ($X_2 - \overline{X}_2$)	$x_1 x_2$	x_1^2	x_2^2
10	0.87	6	0.228	1.368	36	0.051
0	0.44	-4	-202	0.808	16	0.04
10	1.20	6	0.558	3.348	36	0.31
0	0.43	-4	-0.212	0.848	16	0.044
0	0.27	-4	-0.372	1.488	16	0.138
$\sum X_1 = 20$ $\sum \overline{X}_1 = 4$	$\sum X_2 = 3.21$ $\sum \overline{X}_2 = 0.642$	$\sum x_1$	$\sum x_2$	$\sum x_1 x_2$ =7.86	$\sum x_1^2$ =120	$\sum x_2^2$ =0.583

$$r=\frac{x_1 x_2}{\sqrt{x_1^2}\sqrt{x_2^2}}=\frac{7.86}{\sqrt{120}\sqrt{0.583}}=\frac{7.86}{10.95X0.763}=\frac{7.86}{8.35}X0.94 \quad r^2=0.8836$$

$$PE=0.6745\frac{1-r^2}{\sqrt{n}}=0.6745\frac{1-.8836}{2.23}=0.6745\frac{0.1164}{2.23}=0.0352$$

r> PE… Significant

$$t=\frac{r}{\sqrt{1-r^2}}X\sqrt{n-2} \quad =\frac{0.94}{\sqrt{1-0.8836}}X\sqrt{5-2} \quad =\frac{0.94}{\sqrt{0.1164}}X1.73 \quad =4.76$$

Annex -4.2.3

Analysis of Cash DPS and Debt –NIBL

Cash DPS(X_1)	Debt(X_2)	X_1^2	X_2^2	$X_1 X_2$	x_1= ($X_1 - \overline{X}$	x_2= ($X_2 - \overline{X}_2$)	x_1^2	x_2^2	$x_1 x_2$
20	6.83	400	46.64	136.60	5.5	-136.83	30.25	18722	-752.56
15	361.50	225	130682	5422.50	0.5	217.84	0.25	47454	108.92
12.50	350	156.25	122500	4375	-2	206.34	4	42576	-412.68
20	0	400	0	0	5.5	-143	30.25	20449	-786.50
5	0	25	0	0	-9.5	-143	90.25	20449	1358.50
$\sum X_1$ =72.50 $\sum \overline{X_1}$ =14.5	$\sum X_2$ =718.33 $\sum \overline{X_2}$ =143.66	$\sum X_1^2$ =1206.25	$\sum X_2^2$ =253228	$\sum X_1 X_2$ =9934.1	$\sum x_1$	$\sum x_2$	$\sum x_1^2$ =155	$\sum X_2^2$ = 149650	$\sum x_1 x_2$ =-484.32

Regression equation Cash DPS(X_1) on Debt(X_2)

$\sum X_1 = a + b\sum X_2$

72.50 =a+ b718.30

a+718.30b=72.50……(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

9934.10=a 718.30+ b 253228

718.30a + 253228b= 9934.10

718.30a + 515954.89b=52076.75

252726.89b=42142.65

b=0.16

a=-42.42

$$SEE=\sqrt{\frac{\pm_1^{\,2}}{n_1}\Gamma\frac{\pm_2^{\,2}}{n_2}}=\sqrt{\frac{5.57^2}{5}\Gamma\frac{173^2}{5}}=\sqrt{6.20\,\Gamma\,5985.80}=\sqrt{5992}=77.40$$

$$b\,x_1\,x_2=\frac{X_1X_2}{X_1^{\,2}}\quad X\frac{9934.10}{1206.25}=8.235\;b\,x_2\,x_1=\frac{X_1X_2}{X_2^{\,2}}=\frac{9934.10}{253228}=0.0392$$

$$R^2=b\,x_1\,x_2\;X\;b\,x_2\,x_1=0.322$$

Annex -4.2.3

Analysis of Cash DPS and Debt –SCBNL

Cash DPS(X_1)	Debt(X_2)	X_1^2	X_2^2	$X_1 X_2$	$x_1 = (X_1 - \overline{X}_1)$	$x_2 = (X_2 - \overline{X}_2)$	x_1^2	x_2^2	$x_1 x_2$
110	179.16	12100	32098	19707.60	2	116.49	4	13569	232.98
110	78.28	12100	6127	8610.80	2	15.61	4	243.67	31.22
120	55.93	14400	3128	6811.60	12	-6.74	144	45.42	-80.88
130	0	16900	0	0	22	-62.67	484	3927.52	-1378.74
70	0	4900	0	0	-38	-62.67	1444	3927.52	2381.46
$\sum X_1 = 540$ $\sum \overline{X}_1 = 108$	$\sum X_2 = 313.37$ $\sum \overline{X}_2 = 62.67$	$\sum X_1^2$ =60400	$\sum X_2^2$ = 41353	$\sum X_1 X_2$ = 35030	$\sum x_1$	$\sum x_2$	$\sum x_1^2$ =2080	$\sum x_2^2$ =21713.13	$\sum x_1 x_2$ =1186.04

Regression Equation Cash DPS(X_1) on Debt(X_2)

$\sum X_1 = a + b \sum X_2$

$540 = a + b + 313.37$

$a + 313.37b = 540$…….(.i)

$\sum X_1 X_2 = a \sum X_2 + b \sum X_2^2$

$35030 = a\ 313.37 + b\ 41353$

313.37 a+ 41353 b=35030……..(ii)

313.37 a+ 41353 b=35030

313.37a+ 98200.75 b=169219.8

56847.75 b=134189.8

b=2.36

a=-199.55

$$SEE=\sqrt{\frac{\pm_1^{\,2}}{n_1}\Gamma\frac{\pm_2^{\,2}}{n_2}}=\sqrt{\frac{20.89^2}{5}\Gamma\frac{65.89^2}{5}}=\sqrt{83.15\,\Gamma 868.29}=\sqrt{951.44}=30.84$$

$$b\,x_1\,x_2=\frac{X_1X_2}{X_1^{\,2}}\quad X\frac{35030}{60400}\ X0.546\qquad b\,x_2\,x_1=\frac{X_1X_2}{X_2^{\,2}}=\frac{35030}{41353}=.8470$$

$$R^2=b\,x_1\,x_2\,X\,b\,x_2\,x_1=0.4730$$

Annex -4.2.3

Analysis of Cash DPS and Debt –NABIL

Cash DPS(X_1)	Debt(X_2)	X_1^2	X_2^2	$X_1 X_2$	$x_1 = (X_1 - \overline{X}_1)$	$x_2 = (X_2 - \overline{X}_2)$	x_1^2	x_2^2	$x_1 x_2$
50	961.46	2500	924405	48073	-24	508.67	576	258745	-12208
65	229.66	4225	52743	14927.90	-9	-223.13	81	49786	2008.17
70	17.06	4900	291.04	1194.20	-4	-435.73	16	189860	1742.92
85	173.20	7225	29998.24	14722	11	-279.59	121	78170	-3075.49
100	882.57	10000	778929.80	88257	26	429.78	676	184710	11174.28
$\sum X_1 = 370$ $\sum \overline{X_1} = 74$	$\sum X_2 = 2263.75$ $\sum \overline{X_2} = 452.79$	$\sum X_1^2$ =28850	$\sum X_2^2$ =1786367	$\sum X_1 X_2$ = 167174.10	$\sum x_1$	$\sum x_2$	$\sum x_1^2$ =1470	$\sum X_2^2$ =761271	$\sum x_1 x_2$ = -358.69

Regression equation Cash DPS(X_1) on Debt(X_2)

$\sum X_1 = a + b\sum X_2$

370= a+b2263.95

a+2263.95 b=370…….(i)

$\sum X_1 X_2 = a\sum X_2 + b\sum X_2^2$

167174.10= a2263.95 + b 1786367

2263.95a +1786367b=167174.10……. (ii)

2263.95a +1786367b=167174.10

2263.95a +5125469.6b=837661.50

3339102.6b=670487.4

b=0.20

a=-82.79

SEE= $\sqrt{\frac{\pm_1^2}{n_1} \Gamma \frac{\pm_2^2}{n_2}} = \sqrt{\frac{17.14^2}{5} \Gamma \frac{390.19^2}{5}} = \sqrt{58.75 \Gamma 30449.60} = \sqrt{30508.35} = 174.66$

b $x_1 x_2 = \frac{X_1 X_2}{X_1^2}$ X $\frac{\text{Z}358.69}{1470}$ =-0.244 b $x_2 x_1 = \frac{X_1 X_2}{X_2^2} = \frac{\text{Z}358.69}{761271}$ =-0.00047

R^2= b $x_1 x_2$ X b $x_2 x_1$=0.00011468