CHAPTER: I

INTRODUCTION

1.1 General Background

The price of a stock is a function of the value of the equity in a company. Though this, the available stock prices in the market may not accurately reflect the exact value of a company. The value of the firm remains identical in perfect capital market assumptions. The capital markets are perfect, where information is costless and readily available to all investors. There are no transaction costs, and all securities are infinitely divisible. Investors are assumed to be rational and to behave accordingly. In real world, the capital market perfections hardly exist. With the imperfections and/or incompleteness in financial markets, the value of the firm is affected by the earnings firm generates, the dividends firm pays, the book value/net worth of the firm, the revenues that firm generates or the measures that are specific to firm in a sector. The stockholders will benefit from the firm's packaging in a way that takes advantages of these circumstances. The price of a stock can be influenced by market forces like as general economic conditions, government policies, expectations of inflation, etc. There is a broader set of dynamics, which goes into establishing the price of a stock. In addition, stock prices fail to reflect hidden values within a company. This is evident when a company decides to do a spin off and even a stock split can generate higher values.

Stock traded in an open market, where buyers and sellers agree on a price. There is no fixed price like the one you will find at convenience store, instead, prices follow the simple law of supply and demand. When price rises, it means that buyers are continually willing to pay for the stock and sellers are demanding more before they will part with their shares. The demand and supply are based on the environmental forces and the individual's future expectation/assumption. The market price per share is very much sensitive to the environmental forces and the individuals' expectations/assumptions. The share price increases if there is favorable environment and individuals' expectations/assumptions. Internal environmental forces are somehow in control of the organization. Each organization tries to maintain the favorable internal environment to maximize the share price in stock market. On the other hand, external environmental forces are not within the control of the organization, but such forces highly affect the market price of share. The firms try to adjust

themselves according to the changing environmental forces to maximize the market price of shares. There are fundamental (Chen, Roll and Ross, 1986) as well as non-fundamental (Yom, 2000) reasons, which affect the share price. The fundamental reasons include the forces having fundamental values and exist outside the security market like as news about dividends and earnings, fiscal and tax policies, monetary policies, inflation etc. The non-fundamental reasons include the forces having overriding expectations/assumptions and exist inside the security market like as bubbles, fads/overreactions, learning effects, noise traders, and feedback traders.

Dividends are generally paid in cash. Thus, the distribution of earnings uses the available cash funds of the firm. A firm, which intends to pay dividends and also needs funds to finance its investment opportunities, will have to use external sources of financing, such as issue of debt of new common shares. Dividends decision of the firms, thus affect both the long-term financing and wealth of shareholders. As a long term financing decision, dividends will be paid only when the firm does not have enough profitable investment opportunities. The payment of dividend represents a distribution of earnings that cannot be profitably reinvested by the firm. As a wealth maximization decision, shareholders give higher value to the near dividends than the future dividends and capital gains. It is due to the market imperfection and uncertainty. The payment of dividends has a strong influence on the market price of the share. Higher the dividends increase the value of the shares and low dividends decrease the value. In order to maximize wealth under uncertainty, the firm must declare sufficient dividends to meet the expectations of investors. When dividends are increased, though there may be a favorable reaction in the stock market, but the firms may have to forgo some investment opportunities for want of funds and consequently, the future earnings per shares may decrease (Pandey, 1986).

The employment of debt increases the company's earning per share because debt is the cheapest source of fund and provides tax shields. The suppliers of debts have limited participation in the company's earnings/profits and the shareholders of a firm are entitled to the residual income. The leverage employed by a firm is intended to earn more on the fixed charges funds than their costs. Therefore, leverage provides the potentials of increasing the shareholders' earnings. But it creates the risk of loss to shareholders as well. When leverage becomes relatively high, further increases generate significant amount of costs of outside debt including higher expected costs of bankruptcy or financial distress. This gives rise to the

negative market reaction to announcements of new debt issues. It is a double-edged sword (Pandey, 1986).

Shareholders equity represents a cushion of financial strength for organization that can be used to absorb losses and protect the creditors and debt holders (Rose and Hudgins, 2005). The retained earnings are the major sources of growth in organization's equity capital and dividend reduces the organization's ability to generate capital internally. Therefore, dividend cuts and omissions generally follow periods of poor earning or requirements by regulator to increase the firm's capital adequacy. It may signal financial distress. If the company is a highly levered, the bad news will have a more deleterious effect on those with the smallest equity cushion. However, a high net worth of the firm poses positive reaction to the stock prices (Black, Ketcham and Schweitzer, 1995).

The above discussed fundamental reasons are the main focus of this study. This study is directed towards making an inference about the effects of released financial information on the stock prices of commercial banks in Nepal. The study analyzes the relationship between stock prices of commercial banks in Nepal and dividends, total liability and net worth.

1.2 Statement of the Problem

One of the fundamental issues on dividend policy is impact of dividend on stock price. Modigliani and Miller (1958), assuming perfect markets, rational behaviour, and zero taxes, demonstrate that the value of the firm does not depend on the firm's dividend payout ratio. The implication of this result is that whether firm pay dividend or not, it does not affect the market price of the firm because sum of discounted value per share after financing and dividends paid is equal to the market value per share before the payments of dividends. In other words, the stock's decline in market price because of external financing offsets exactly the payment of the dividend. Therefore, stockholders are indifferent between dividend and retention of earnings and subsequent capital gains. Later, (Modigliani and Miller, 1959) argue that if earnings consist of a transitory and a permanent component and if dividends are related to the permanent components, then dividends will be a surrogate for expected future earnings. This has been referred to as the "information-content-of-dividends" hypothesis. In a similar vein, Miller (1980) argues that dividend changes provide signals to investors about management's perception of the firm's future earnings streams. Management will not increase dividend unless certain that future earnings will be sufficiently large enough to

support the higher dividend. Conversely, dividend cuts are perceived as bad news and negative signals to investors. Thus, if a firm seeks a policy of dividend stabilization, investors will interpret a change in the dividend payout rate a change in management's views of the firm's future profitability. This has been referred to as the reluctance-to-change hypothesis (Aharony and Swary, 1980). This study attempts to analyze some of these issues in the context of Nepalese commercial banks.

More recently, the impact of debt on stock price has also considered as an important issue. The employment of debt increases the company's earning per share because debts are the cheapest sources of funds and provide tax shields. The agency cost hypothesis reveals that high leverage or a low equity/asset ratio reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholders (Jensen and Meckling, 1976; Harris and Raviv, 1991; Myers, 2001). The greater financial leverage may affect managers and reduce agency costs through the threat of liquidation, which causes personal losses to managers of salaries, reputation, perquisites, etc. (Grossman and Hart, 1982; Williams, 1987), and through pressure to generate cash flow to pay interest expenses (Jensen, 1986). Higher leverage can alleviate conflicts between shareholders and managers concerning the choice of investment (Myers, 1977), the amount of risk to undertake (Jensen and Meckling, 1976; Williams, 1987), the conditions under which the firm is liquidated (Harris and Raviv, 1991), and dividend policy (Stulz, 1990). When leverage becomes relatively high, further increases generate significant agency costs of outside debt including higher expected costs of bankruptcy or financial distress arising from conflicts between bondholders and shareholders. This gives rise to the negative market reaction to announcements of new debt issues (Dann and Mikkelson, 1984; Eckbo, 1986; Mikkelson and Partch, 1986). This study attempts to examine some of these issues in the context of Nepalese commercial banks.

The issue also relates to the impact of net worth on stock price. A capital adequacy is an important consideration in the management of the organization. The retained earnings are the major source of growth in organization's equity capital whilst dividends reduce the organization's ability to generate capital internally (Mayne, 1980). The past study reveals that a company may face pressure from investors to increase equity rather than continue current dividend policy to absorb any kind of financial distress (Johnson, 1981). Similarly, if a firm makes the cut for the avowed purpose of

retained profit in order to strengthen its capital structure, then the reaction from market should be positive. If not so happens the reaction is always negative, a dividend cut may have an adverse effect on stock prices (Robertson, 1975). This study is directed towards measuring some of these issues in the context of Nepalese commercial banks.

The above discussion reveals that the stock price does not depend upon the released financial information only but it also depends on the interpretation and conveyed meaning of those released information to determine the prices of stocks. This study attempts to deal with the following issues relating to Nepalese capital market:

1. Is there any informational content in the release of accounting and financial information on dividends, total liability and net worth?
2. Are dividends, total liability and net worth capable of determining the stock prices of commercial banks?
3. What is the relationship between share price and dividends, total debt and net worth?
4. How is the stock price related to the dividends, total debt and net worth?
5. How sensitive is the stock price to the dividends, total debt and net worth?

1.3 Objectives of the Study

The major objective of the study will be to examine the impact of dividends, total debts and net worth on stock prices of commercial banks in Nepal. The specific objectives of the study will be as follows:

1) To examine the relationship between stock price and dividend, total debt and net worth.

2) To analyze the sensitivities between stock price and dividend, total debt and net worth.

3) To evaluate the impact of change in dividend, total debt and net worth on the investors' expectations.

1.4 Hypothesis

The following hypotheses are developed and tested in this study:

Hypothesis 1: An increase in dividend increases the price of stock.

Hypothesis 2: An increase in debt increases the price of stock.

Hypothesis 3: An increase in NWTA ratio increases the price of stock.

Hypothesis 4: An increase in P/E ratio increases the price of stock.

Hypothesis 5: An increase in market return increases return on stock.

Hypothesis 6: An increase in net profit increases return on stock.

Hypothesis 7: An increase in dividend increases return on stock.

1.6 Organization of the Study

The study has been organized into five chapters. Each chapter is devoted to some aspect of the study of impact of dividends, total debts and net worth on stock prices of commercial banks in Nepal. The titles of each of the chapters are as follows:

Chapter One : Introduction

Chapter Two : Review of Literature

Chapter Three : Research Methodology

Chapter Four : Data Presentation and Analysis

Chapter Five : Summary, Conclusions, and Recommendations

The contents of each of the chapters of this study are briefly mentioned below:

The chapter one contains the introductory part of the study. As already mentioned, this chapter describes the major issues to be investigated along with the general background, statement of the problems, objectives of the study.

The chapter two consists of the review of literature. It includes a discussion on the theoretical framework and a brief review of the major empirical works. The discussed theoretical framework in this chapter investigates the share price in terms of various factors like as dividend, total liability and net worth.

The chapter three describes the research methodology employed in the study. This chapter deals with research design, population and sample selection, sources of data, method of analysis, and definition of key terms.

The chapter four is devoted to the empirical analysis of the study. It describes about the relationship between share price and cash dividend, earning, leverage, net worth to total assets ratio, roa, eps to mps ratio. It also describe about major findings of the study.

The chapter five states the summary of the study, conclusion and recommendations about the topic concerned.

CHAPTER: II

REVIEW OF LITERATURE

This chapter has been organized into three sections. Section one presents a discussion on the theoretical framework. The review of empirical works on the relationship between stock price and its determinants has been presented in section two. Similarly, section three and four is devoted to the concluding remarks and research gap respectively.

2.1 Theoretical Framework

2.1.1 Common Stocks and Security Market

2.1.1.1 Common Stock

The common stocks represent ownership in a company. The holders of common stocks, called shareholders or stockholders, are the legal owners of a company. The common stocks are the permanent and vital source of capital since they do not have a maturity date. For the capital contributed by the shareholders by purchasing common stocks, they are entitled to dividends. The amount or rate of dividend is fixed by the company's Board of Directors. The amount or rate of dividend is fixed by the company's Board of Directors. The common stock is, therefore, known as the variable income security. Being the owners of the company, the stockholders bear the risk of ownership; they are entitled to dividends after the claims of other suppliers of capital have been met. (Pandey, 1995:905)

The common stocks are issued by the firms to raise ownership capital and the investors buy them with the expectation that they receive a share of profit periodically. The common stocks legally represent the equity of business firm, and the holders are the owners who share all the profits and losses of the business. They enjoy all earnings after meeting the obligations of interest on debts and dividends on preferred stocks. Thus, they enjoy all net benefits of the business by assuming the risk of losing their capital. (Pradhan, 1996:132-133,333)

2.1.1.2 Securities Market

"A securities market is a place where people where people buy and sell financial instruments". In other words "an organized security market is a place where, or a system through which, securities are created and transferred." (Blake, 1996)

Securities market can be classified according to the securities traded in. They are money markets and capital market. Money markets deal in securities with less than one year to maturity, whereas capital markets deal in securities with more than one year to maturity. Money market is created by a financial relationship between suppliers and demanders of short-term funds. Short term debt instruments like Treasury bill, commercial paper, and negotiable certificates of deposit issued by government or financial institutions etc. are traded in the money market. On the other hand, long-term debt instruments like stocks, bonds, and debenture etc. are traded in the capital market.

Securities Market exists in order to bring together buyers and sellers of securities. It means the market where the securities are treated. In such market, buyers and sellers are mechanisms created to facilitate the exchange of financial assets. It can be distinguished as:

a. Primary Market & Secondary Market
b. Money Market & Capital Market

(a) Primary Market & Secondary Market

(i) Primary Market

"The primary market is the new issue market where an investment bank brings a new company to flotation; its shares are issued on the primary market as an initial public offering."
"Primary market is the only market in which the corporate or government issuer is directly involved in the transaction and receives direct benefit from the issue that is, the company actually receives the proceeds from the sale of securities."(Gitman, 1988:31-32)

Securities available for the first time are offered through the primary securities markets. The issuer may be a brand new company or one that has been in business for many years. The key is that these securities absorb new funds for the coffers of the issuer. It is also known as New Issue Market (NIM).

(ii) Secondary Market

"Secondary markets are those in which financial securities already outstanding are exchanged among investors." (Jacob & Petit, 1984:6-7)

The secondary market is not keeping pace with the growth of the primary market. This is mainly due to lack of the needed efforts on the concerned authority to devise suitable package of measures to encourage the growth of brokers' networks in the country's growing stock exchange. (Shrestha, 1992:18)

The secondary market can be viewed as "used or pre-owned" securities market. The secondary markets comprise the organized securities and the over-the-counter (OTC) market. The organized securities exchanges are centralized auction markets, whereas the OTC market consists of a loosely organized, decentralized network of negotiated markets. The majority of all capital market transactions occur in the secondary market.

The proceeds from sales of securities in the secondary market do not go to the original issuer but to the seller or owner of the securities. The function of the secondary market is to provide liquidity for securities in the primary markets.

"The term 'security' means 'piece of paper' that serves as evidence of rights." (Sharpe, Gordon and Jeffery, 2001:1-6)

(b) Money Market & Capital Market

(i) Money Market

Money Market is also called short term financial market which is the act of supplying short term debt or working capital needed for industries, business or incorporated etc.

(ii) Capital Market

Capital Market is the market where the transaction of long-term finance is made. The funds collected in this market are raised and traded by long-term financial instruments such as equities and bonds.

2.1.1.3 Financial Intermediaries

Financial intermediaries are also known as financial institutions. They are organizations that issue financial claims against themselves and they use the proceeds from this issuance to purchase primarily the financial assets of others.

2.1.1.4 Market Price of Share

"Market Price of Shares as the output of the demand and supply interaction is the most influencing factor in determining the price of the stock." (Ackerman, 1980:10).

In relation to the interacting forces of demand and supply that is Market Price is determined at given time and the prices and volumes of its past transaction are meaningful indications of probable relationship of future supply and demand pressure. And such relationship is the most important element in determining the probable direction of the price movements. If the demand exceeds the supply, the price will rise and if the supply exceeds the demand the price will fall.

2.1.1.5 Buying and Selling Stock

"Various people are likely to be involved, when a stock is sold and bought. Although it is possible for two investors to trade with each other directly, usually the service is provided by the by brokers, dealers and markets." (Sharpe, Alexander & Bailey, 1996:21).

When buying or selling the common stock, the investor places an order involving a round lot, and odd lot, or both. Generally, round lot means that the order is for 1000 shares or multiple of 100 shares. An odd lot orders generally are for 1 to 99 shares.

The investor must specify a time limit on his/her order for day orders the broker will attempt to till the order only during the day in which it was entered. If the order is not filled by the end of the day, it is canceled. If the investor does not specify a time limit, week and month orders expire at the end of the respective calendar week or month during which they are entered, provided that they have not filled them.

2.1.1.6 Market Size

"Relative's market capitalization and the number of listed companies can measure stock market size. The market capitalization ratio, is determined by dividing the value of all share listed on a national exchange by the host country's Gross domestic product." (World Bank, 1995:6)

2.1.1.7 Market Liquidity

Liquidity – or – the ability to buy and sell securities is indicated by two measures. One is the total value of share traded on the stock exchange divided by GDP. The second measure of liquidity is the turnover ratio the value of total shares traded divided by market capitalization.

2.1.1.8 Market Concentration

Concentration is determined by computing the share of market capitalization for the largest stocks on the exchange.

2.1.1.9 Market Capitalization

Market Capitalization is the market value of listed share. In other words, it is the product of closing market price and the number of listed share of a company or companies.

2.1.1.10 Volatility

Volatility is indicated by a 12 month rolling standard deviation estimate based on the market returns. Although volatility is not necessarily a sign of more or less stock market development, lower volatility generally reflects a more developed stock market.

2.1.2 Efficient Market Theories

An efficient market is defined, securities prices reflect quickly and accurately by all knowing information. This efficient market concept assumes that all known information is reflected in the price, including not only past information, but also current information as well as events that have been announced but have not yet transpired. For instance, if many investors believe that dividends this year will decline, prices will reflect this belief before the actual decline occurs and vice versa.

An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently except by luck. (Pike & Neal, 1996:41)

In an efficient capital market, current market prices fully reflect available information. (Fama, 1996:133)

In an efficient market, a security's price would correctly reflect the important variables for that security and would represent and unbiased estimate of its investment value. (Cheney & Moses, 1992:746)

An efficient market is an assumed perfect market in which there are many small investors, each having the same information and expectations with respect to securities; there are no restrictions on investment, no taxes, and no transaction costs; and all investors are rational, view securities similarly, and are risk-averse, preferring higher returns and lower risk. (Gitman, 2000:265-266)

There are several concepts of market efficiency and there are many degree of efficiency, depending on the market. Markets in general are efficient when:

I) Prices adjust rapidly to new information;

II) There is a continuous market, in which each successive trade is made at a price close to the previous price (the faster that the price responds to new information and the smaller the difference in price changes, the more efficient the market;

III) The market can absorb large amounts of securities without destabilizing the prices. (Block & Hirt, 1998:420)

According to Prof. Eugene Fama there are three hypotheses of Market Efficiency.

a) Weakly Efficient Market Hypothesis

b) Semi Strong Efficient Market Hypothesis

c) Strongly Efficient Market Hypothesis

a) <u>Weakly Efficient Market Hypothesis</u>

Weakly efficient markets are defined as markets where past prices provide no information that would allow a trader to earn a return above what could be attained with a naïve buy-and-hold strategy. The movements of future prices are independent of previous prices. Therefore, it is related to random walk hypothesis of price movements. Furthermore, this hypothesis stipulates that price of the stocks have absorbed only the stock market information but not the public information. Thus, technical analysis that relies on the past history of price and volume information is of little or no value. The implication of this hypothesis is that k owing and using the past sequence of price information is of no value to an investor.

b) Semi Strong Efficient Market Hypothesis

This hypothesis specifies that market is efficient enough for prices to reflect all publicly available information. Consequently, only those insiders who have access to valuable information could earn a profit larger than what strategy. It also states that current prices of the stocks reflect not only stock market information but also publicly known and available data such as earnings, dividends, stock - split announcements, new product developments, financing difficulties, and accounting changes.

c) Strongly Efficient Market Hypothesis

The strong form of efficient market hypothesis states that stock prices immediately adjust to and reflect all information, public or otherwise. In general, this means that no group of investors can earn excess return through a superior ability to analyze publicly available information. In other words, investors who transform public information into private information do not gain by doing so.

In short, this hypothesis asserts that stock prices fully reflect all public and nonpublic information, and there by no investor can earn abnormal returns.

The requirements for a securities market to be efficient are:

a) A large number of rational, profit-maximizing investors exist who actively participate in the market by analyzing, valuing, and trading stocks. These investors are price takers; that is, one participant alone cannot affect the price of a security.

b) Information is free of cost and widely available to market participants at approximately the same time.

c) Information is generated in a random fashion such that announcements are basically independent of one another.

d) Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly.

(Jones, 1988:425)

2.1.2.1 Limitations of Efficient Market Theory

Though the subject of market efficiency has been much concerned area of the study for the academicians and researchers in recent times, "the advocates of the efficient market theory are matched by an equally eloquent opposing camp which argues that the stock market is neither competitive nor efficient. The critics contend that one or more of the following factors cast their shadow over the efficiency and competitiveness of the stock market. (Chandra, 1994:589)

(i) Information inadequacy: Information is neither freely available nor rapidly transmitted to all participants in the stock market. In addition, there is a calculated attempt by many companies to circulate "misinformation".

(ii) Limited information processing capabilities: Human information processing capabilities are sharply limited. As Nobel Laurente Herbert Simon observed: "Every human organism lives in an environment which generates millions of new bits of information every second, but the bottleneck of perceptual apparatus certainly does not admit more than a thousand bits per second and possible much less.

Taking a dig at the expect who claim to have superior information processing abilities, David Dreman said: "Under conditions of anxiety and uncertainty, with a vast interacting information grid the market can become a gaint Rorschach test, allowing the investor to see any

Paltern he wishes….. expert can not only analyze information incorrectly, they Can also find relationships that aren't there a phenomenon called illusory correlation." (Dreman, 1984:147)

(iii) Irrational behavior: In theory, it is generally assumed that investor's rationality will ensure a close correspondence between market prices and intrinsic value. In practice, this may not be true. As J.M. Keynes argued: In point of fact all sorts of consideration enter into the market valuations which are in no way relevant to the prospective yield. A similar observation was made by L.C. Gupta: "Our findings suggests that the market's evaluation process works haphazardly almost like a blind man firing a gun….The market seems to function largely on a 'hit-or-miss' basis rather than on the basis of informed beliefs about the long-term prospects of individual enterprises." (Gupta, 1981:775)

(iv) Monopolistic influence: In theory, the market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over price. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

Finally, due to these challenges posed by the critics of efficient market theory, there are many factors to point the finger at its reality, validity and authenticity. This appears to be move true like relatively less developed capital market of Nepal. Nepalese capital market is yet to be efficient in terms of information as well as operations.

2.1.3 Informational Content of Dividend

"Dividends refer to that portion of a firm's net earnings which are paid out to the shareholders." (Khan and Jain, 1992:543)

Generally dividends are paid in cash. Therefore it reduces the cash balances of the firm. The policy made by the firms about the dividend payment affects the financial structure, the flow of funds, corporate liquidity and investors' attitudes.

On the other hand, it is asserted that dividends are important in stock price formation because they have informational value. The payments of dividends convey to shareholders that the company is profitable and financially strong. Furthermore, an increase in payout ratio signals to shareholders a permanent or long term increase in firm's expected earnings, whereas a dividend reduction signals a poor earnings forecast. Accordingly, the price of share may be affected by changes in dividend policy. "In an uncertain world in which verbal statements can be ignored or misinterpreted, dividend action does provide a clear-cut means of making a statement that speaks louder than thousand words." (Ezra, 1963:142)

2.1.4 Behavior of Stock Market Prices

People have been studying the way security prices fluctuate for over a century. In 1841 Charles Mackay assembled a book of readings about Tulipmania and some equally famous market "bubbles" which had a self-explanatory title: Extraordinary Popular Delusions and the Madness of Crowds. (Mackay, 1841)

In contrast to Mackay's astonishing stories, in 1900 a French mathematician named Louis Bachelier set forth formal models in which security prices were random outcomes that had probabilities attached to them. (Bachelier, 1964)

Bachelier was one of the first to study security price movements mathematically. Then, in 1936 the famous economist John Maynard Keynes suggested the following scenario. (Keynes, 1936:154-155)

……Most of these persons are, in fact, largely concerned, not with making superior long-range forecasts of the probable yield of an investment over its whole life, but with forecasting changes in the conventional basis of valuation a short time ahead of the general public. They are concerned, not with what an investment is really worth to a man who buys it "for keeps", but with what the market will value it at, under the influence of mass psychology, three months or a year hence……. For it is not sensible to pay 25 for an investment of which you believe the prospective yield to justify a value of 30, if you also believe that the market will value it at 20 three months hence.

Thus the professional investor is forced to concern himself with the anticipation of impending changes, in the news or in the atmosphere, of the kind by which experience shows that the mass psychology of the market is most influenced.

Thinking took another turn during the 1950, when an econometrician named Holbrook working and his colleague articulated the nation that security prices fluctuated around their intrinsic values. (Holbrook, 1958:188-199)

Over the decades many financial economists have suggested models to describe the behavior of security prices. But, until massive security price data could be statistically analyzed with computers, the various theories about security price movements were largely conjectures.

2.1.5 Stock Prices and Valuation Model

The valuation model estimates the theoretical/intrinsic value of stock (denoted V_0) is defined as the present value of cash all cash payments to the investors in the stock including dividend as well as the proceeds from the ultimate sale of stock, discounted at the appropriate risk-adjusted interest rate (k). Whenever the intrinsic value, or the investor's own estimate of what the stock is really worth, exceeds the market price, the

stock is considered undervalued and a good investment (Bodie, Kane and Marcus, 2002). Similarly, if the intrinsic value turns out to be lower than the current market price, investors should buy less of it than under passive strategy.

In market equilibrium, the current market price will reflect the intrinsic value estimates of all market participants. This means the individual investors whose V_0 differs from the market price (P_0), in effect must disagree with some or all of the market consensus estimates of expected dividends, expected sales proceeds, or the capitalization rate (Bodie, Kane and Marcus, 2002). The valuation process quickly absorbs seasonal events like those reported in newspaper. And value estimation provides the focal point towards which natural economic forces push security prices (Francis, 1989). Price of security fluctuates randomly around the value continuously and the actual market price of stock striving towards equilibrium must reflect the theoretical value of stock. Such interaction creates new price. An under-priced stock motivates the market participants and increases the net buying pressure in the market, which tends up price of stock. Similarly, an over-priced stock motivates the market participants and increases the net selling pressure in the market, which pushes price down of stock. With every change in price level, the stock's expected future price gains/losses must be revised, which can affect both its expected return and its risk. In addition, every time a new piece of information about a stock is obtained, that stock's value may change. Since, the new information arrives continuously, the value estimates change continuously. And the buying and selling pressure in the marketplace keep market prices in continuous motion as they pursue the continuously changing values (Francis, 1989).

2.1.6 Stock Price and Dividend

Dividends refer to that proportion of a firm's net profits\earnings, which are paid out to the shareholders. Since, dividends are distributed out of the profit; the alternative to the payments of dividends is the retention of earnings/net profits. The retained earnings constitute an easily accessible important source of financing the investment requirement of the firms. There is, thus, a type of reciprocal relationship between retained earnings and cash dividends: larger the retention, lesser dividends; smaller retentions, larger dividends. Thus, the alternative uses of the net profits/earnings-dividends and retained earnings-are competitive and conflicting (Khan and Jain, 1994).

The both decisions have enough significance in increasing the firm's stock price/maximizing the wealth of the owners.

The usual practice is to pay dividends in cash whilst other option is payment of the bonus shares or stock dividend. A company should have enough cash in its bank account when cash dividends are declared; if not the arrangement should be made to borrowed funds. The cash account and the reserves account of a company will be reduced when the cash dividends is paid. The total assets and the net worth of the company are reduced when the cash dividend is distributed (Pandey, 1999). Therefore, payment of dividends in cash is the alternative uses of enough earnings. The market price per share drops most of the cases by the amount of the cash dividends distributed (Hastings, 1966). An issue of bonus share represents a distribution of shares in addition to the cash dividend to the existing shareholders of the company. This has the effect of increasing the number of outstanding shares of the company. The shares are distributed proportionately. Thus, a shareholder retains his/her proportionate ownership of the company. The declaration of bonus shares will increase the paid-up share capital and reduces the reserves and surplus (retained earnings) of the company but the total net worth is not affected by the bonus shares issue. In facts a bonus share issue represents a recapitalization of the owners' equity proportion, i. e., the reserves and surplus. The earnings per share and market price per share will fall proportionately to the bonus shares issues (Pandey, 1999).

Cash dividend payments can affect stock prices when they convey to investors valuable information about the expectation and intentions of corporation's board of directors or give outsiders some other valuable signal (Asquith and Mullins, 1983; Brickley, 1983; Dielman and Oppenheimer, 1984). Even if a company borrows heavily to simply pay out large dividends can boost values. Payments of dividend send a message to the marketplace about what company performs. Firms may pay dividends to signal their future prospects. This explanation is known as the information content of dividends or signaling hypothesis. The intuition underlying this argument is based on the information asymmetry between managers (insiders) and outside investors, where managers have private information about the current performance and future fortunes of the firm that is not available to outsiders. Here, managers are thought to have the incentive to communicate this information to the market. According to signaling

models, (Bhattacharya, 1979; John and Williams, 1985; Miller and Rock, 1985) dividends contain this private information and therefore can be used as a signaling device to influence share price. An announcement of dividend increase is taken as good news and accordingly the share price reacts favourably, and vice versa. Only good-quality firms can send signals to the market through dividends and poor-quality firms cannot imitate these because of the dissipative signaling costs (for example, transaction costs of external financing, or tax penalties on dividends, or distortion of investment decisions). Moreover, as suggested by Lintner (1956), firms do not increase dividends unless the new level of dividends can be sustained at least in the near future. They are also reluctant to cut dividends because managers believe that it hurts a firm's reputation.

2.1.7 Stock Prices and Leverage Ratio

The leverage ratio measures the level of debt in relation to our investment in assets or the percent of funds provided by creditors and to what extent our assets protect us from creditors (Evans, 2000). The assets of company can be financed either by increasing the owners' claims (equity financing) or by the creditors' claims (debt financing). The owners' claims increase when the firm raises funds by issuing ordinary shares or by retaining the earnings; the creditors claims increases by borrowing (Pandey, 1999). The term leverage may be defined as the employment of assets of sources of funds for which the firms has to pay a fixed cost or fixed return (Khan and Jain, 1994). Therefore, the employment of the debt increases the company's earnings per share because debts are the cheapest sources of fund and provide tax shields. The leverage employed by a firm is intended to earn more on the fixed charges funds than their costs. The surplus (or deficit) will increase (or decrease) the return on the owners' equity. The leverage at once provides the potentials of increasing the shareholders' earnings as well as creating the risk of loss to them. It is a double-edged sword (Pandey, 1999). The lower the interest rate, the greater will be the profit, and less the chance of loss; the less amount borrowed the lower will be the profit or loss; also the greater the borrowing, the greater the risk of unprofitable leverage and the greater the chance of gain.

A low debt ratio would indicate that organization has sufficient assets to cover debt load. Creditors and management favor a low debt ratio (Evans, 2000). Debt is normally

responsible for firms' bankruptcy (Showalter, 1999). Volatility of earnings increases the likelihood of bankruptcy, and hence the cost of debt. Risk and firm leverage should be therefore inversely related. Firms with lower investment related tax shields will employ greater debt in their capital structure. Tax shield substitutes for debt, such as depreciation, should therefore lessen the tax advantage of debt (Piga, 2001; DeAngelo and Masulis, 1980). Dann and Mikkelson, (1984), Eckbo (1986) and Mikkelson and Partch (1986) offer limited and sometimes conflicting arguments to explain the negative market reaction to announcements of new debt issues.

2.1.8 Stock Price and Net Worth

Net worth represents the value of the stakeholders' investment in the institution whilst the net worth to total assets ratio shows the equity shareholders claims against the total assets. In the real organization, the risk of the value fluctuation is borne by the equity shareholders (Brigham, Gapenski and Ehrhardt, 1999).

Nevertheless, the owners' equity measures the owners' wealth in the company and resources that exist somewhere in the company. The owners' equity is simply the mirror image of the specific assets and debts that exist in the company and shows a division of the same amount according to whether or not the owners might take out parts of the company assets as dividends (Lonnquist, Smith and Ostrom, 1994). Shareholders equity represents a cushion of financial strength for organization that can be used to absorb losses and protect the creditors and debt holders (Rose and Hudgins, 2005).

The retained earning account is build up over the time as the firm reinvest as a part of its earnings rather than paying all earnings as a dividend (Brigham, Gapenski and Ehrhardt, 1999). Therefore, dividend cuts and omissions generally follow periods of poor earning or requirements by regulator to increase the firm's capital adequacy. Thus, it may signal financial distress. Moreover, if the company is a highly levered, the bad news will have a more deleterious effect on those with the smallest equity cushion. Therefore, the sign of the coefficient is always expected positive (Black, Ketcham and Schweitzer, 1995).

To a sum up, there are significant schools of thoughts regarding the impact of dividends, debt employments, beta coefficient, earnings, P/E ratio, and net worth to total assets ratio on the valuation of firms. According to school of thought, dividends, debt employments, beta

coefficient, earnings, P/E ratio, and net worth to total assets ratio have a positive impact on the value of firm measured in terms of market price of shares.

2.1.9 Factors Affecting Share Price

(I) Earning Per Share (EPS)

Accounting earnings that represent the difference between revenues and expenses, including the expenses associated with non-equity source of funds (such as interest to debt, dividend to preference share) is also known as total earnings available for common stock. If this portion of income is dividend by number of outstanding shares, we get earning per share. (Sharpe, Alexander and Biley, 2001:622)

(II) Retained Earnings

The balance sheet account which indicates the total amount of earnings the firm has not paid out as dividend throughout its history; these earnings have been reinvested in the firm.

(III) Dividend per Share (DPS)

The percentage of earnings the firm pays in cash to its shareholders is known as dividend. The dividends, of course, reduce the amount of earnings retained in the firm and affect the total amount of internal financing. (Horne, 2000:305)

Nothing is more important than dividends to stockholders. They buy shares of firm with the hope of sharing profits earned by firms. The sole motive of stockholders is to receive return on their investment; nothing pleases them more than knowing the firm's earning and more profits mean more dividends coming in. (Pradhan, 1996:375-376)

Krishman opines that of two stocks with identical earnings record and prospect, but the one paying a large dividend than the other, the former will undoubtedly command a higher price merely because stockholders prefer present to future values. Stockholders often act upon the principle that a bird in the hand is worth two in the bush and for this reason, that are willing to pay a premium for the stock with the higher dividend rate. (Pandey, 1995:681)

(i)Cash Dividends

Payments made in cash to stockholders are termed cash dividends. For which, a firm needs to have enough cash in its bank account. When cash dividend is declared, the cash account and reserves account of the firm will be reduced, thus both the total assets and the net worth of the firm are reduced in case of distribution of case dividend.

(ii)Stock Dividend

An issue of bonus share represents a distribution of shares in addition to cash dividend (known as stock dividend in USA) to the existing stockholders. This practice has the effect of increasing the number of outstanding shares of the company, which are distributed proportionately. Thus, a shareholder retains his/her proportionate ownership of the company. (Pandey, 1995:705-706)

(IV) Stock Splits

Stock splits have an effect on a firm's share price similar to that of stock dividends. A stock split is a method commonly used to lower the market price of a firm's stock by increasing the number of shares belonging to each shareholder. Quite often, a firm believe that its stock is priced too high and that lowering the market stock to enhance the marketability of the stock and stimulate market activity. A stock split has no effect on the firm's capital structure. It commonly increases the number of shares outstanding and reduces the stock's per share par value. In other words, when a stock is split, a specified number of new shares are exchanged for a given number of outstanding shares. In a 2-for-1 split, two new shares are exchanged for a given number of outstanding shares. Sometimes, a reverse split is made. A certain number of outstanding shares are exchanged for two old shares; in a 2-for-3 split, two new shares are exchanged for three old shares, and so on. (Gitman, 1988:627-628)

(V) Stock Repurchase

In the recent past, firms have increased their repurchasing of shares of outstanding common stock in the market place. A stock repurchase is made for a number of reasons: to obtain shares to be used in acquisitions, to have shares available for employee stock option plans, to achieve a gain in the book value of equity when shares are selling below their book value, or merely to retire outstanding shares. The accounting entries that result when

common stock is repurchased are a reduction in cash and the establishment of contra capital account called 'treasury stock', which is shown as deduction from stockholders' equity. The repurchase of stock can be viewed as a cash dividend, since it involves the distribution of cash to the firm's owners, who are the sellers of the shares. The advantages of stock repurchases are an increase in per share earnings and certain owner tax benefits. The tax advantage stems from the fact that if the cash dividend is paid the owners will have to pay ordinary income taxes on it. Of course, when the stock is sold, if the proceeds are in excess of the original purchase price, the capital gain will be taxed as ordinary income (Gitman, 1988:628-629)

(VI) Net Worth Per Share (NWPS)/Book Value Per Share

A corporation will generate income, much of which is paid out to creditors (as interest) and to shareholders (as dividend). Any reminder is added to the amount shown as cumulative retained earnings on the corporation's books. The sum of cumulative retained earnings and others entries (such as common stock and capital contributed in excess of the par value) under shareholder's equity is the book value of the equity. The book value per share is obtained by dividing the book value of the equity by the number of shares outstanding. (Sharpe, Alexander Biley, 2001:506)

The book value of the equity reflects the historical costs of –brick and meter- the physical assets of the company. A well run company with strong management and an organization that functions efficiently should have a market value greater than the historical book value of its physical assets.

The accounting value of a share of common stock equal to the common equity of the firm (common stock plus retained earnings) divided by the number of shares outstanding.

Book value is generally considered to be relatively unimportant in determination of the value of company, since it represents only the historical investments made in the company-investments that may have little relating to current values of price.

(VII) Market Price per Share (MPS)

The market price of any asset, indeed, depends on the future earning power of the asset or the value of an asset depends on the future cash flows that the asset is expected to generate. (Pradhan, 1996:20)

Once the shares, issued in the primary market, are listed in the stock exchange, investors are able to buy and sell the shares among themselves with the help of brokerage firm. Generally the prices of shares are determined by demand and supply preferences.

Due to the market imperfection and uncertainty, shareholders may give a higher value to the near dividend and capital gains. Thus, payment of dividend may significantly affect the market price of shares. Higher dividends increase the value of shares and low dividends reduce the value. (Pandey, 1995:681)

Given the two companies in the same general position and with the same earning power, the one paying the larger dividend will always sell at higher price. (Pandey, 1995:687)

The price of firm's stock reflects expectation about its future earnings and dividends.

2.2. Review of Related Studies

Herein, an attempt is made to present some theories that are related to share price and dividend.

2.2.1 Review of National and International Theories

2.2.1.1 Walter's Study

Professor James E. Walter studied the relationship between dividend and share price in 1966 and presented a share price valuation model by arguing that the choice of dividend policies almost always affect the value of the firm. According to him payment of earnings in the form of dividends is relevant in the formation of share price. But he suggested that the relationship between firm's internal rate of return and cost of capital is the main determinant to decide whether dividends should be distributed or not.

Assumptions of the Walter's Model are

1. Retained earning is one and only source of financing i.e. the firm does not issue debt or new equity.

2. All earnings of the firm are either distributed as dividends or reinvested internally.

3. The firm's rate of return(r) and cost of capital (k) remain constant.

4. There is no change in values of earning per share and dividend per share.

5. The firm has perpetual life.

The formula for determining the market price per share is given below.

$$p = \frac{DPS}{K} + \frac{r(EPS - DPS)/K}{K}$$

Where: p = Market price of share

EPS = Earning per share

DPS = Dividend per share

r = Internal rate of return

K = Cost of capital

According to this model, there are three kinds of firms.

a. Growth Firms(r>k)

If the firms' internal rate of return exceeds the opportunity cost, the relation between dividend and stock price is negative. This implies that higher payments of dividends will result lower stock prices. The firms will maximize the value per share if they follow a policy of retaining all earnings for internal investment. Such firms are called growth firms.

b. Normal Firms(r=k)

If the firm's internal rate of return is equal to cost of capital, there is no role of dividends on stock prices. Such firms are usually termed as normal firms.

c. Declining Firms(r<k)

If the firm's internal rate of return is less than the cost of capital, such firm is known as declining firm and there exists positive relationships between stock prices and dividend. Hence payment all earning as dividend is the optimal decision to maximize the market price per share.

Thus in Walter's model, the dividend policy of the firm depends on the availability of investment opportunities and the relationship between the firm's internal rate of return "r" and cost of capital "k" .The firm should use earnings to finance investments if r>k. should distribute all earnings when r<K and would remain indifferent when r = k. Thus, Dividend policy is a financing decision when dividend policy is treated as a financing decision the payment of cash dividend is a passive residual. (Walter, 1963:280-291)

2.2.1.2 Gordon's Study

Myron J. Gordon studied the relationship between divided and stock prices, and developed the most popular dividend capitalization model, which states that dividend policy of firm affects stock prices. In addition to Walter's model, he suggested that dividend policy does affect the value of share even when internal rate of return equals the capitalization rate. This view is based on the assumption that rational and risk-averse investors prefer present dividend to future capital gains. In other words bird-in-the-hand argument does apply here in case of rational investor. Thus, this argument suggested that an increase in dividend Payout ratio lead to increase in the stock prices for the reason that investors consider the dividend yield less risky than the capital gain.

This model relies on the following assumptions.

a. The firm is an all equity firm.

b. No external financing is available i.e. the only source of financing new investment is retained earnings.

c. The internal rate of return 'r' and the appropriate discount rate 'k' are constant.

d. There are no taxes on corporate income.

e. The retention ratio 'b', once decided upon, is constant. Thus, the growth rate g=br is constant forever.

f. The discount rate k must be greater that growth rate g.

g. The firm and its stream of earnings are perpetual.

Based on the above assumptions, formula provided by Gordon for determining market value of a share, which is a simplified version of original formula, can be expressed symbolically as:

$$p = \frac{EPS(1-b)}{Ke - b \times r}$$

Where: p = market price of share

EPS = earning per share

b = retention ratio

$1-b$ = dividend payout ratio

Ke = capitalization rate or cost of capital

$b \times r$ = growth rate

In the conclusion, Gordon suggested that share price and dividends have negative relationship for growth firms and positive relationship for declining firms. Moreover, he concluded that share value remains constant regardless of changes in divided policies in the case of normal firms.

According to this model, the following facts are reveals.

First Case: Growth Firm (r > Ke)

Share price tends to decline is correspondence with increase in payout ratio or decrease in retention ratio that is high dividend lead to decrease in share price. Therefore, Dividend and stock prices are negatively correlated in growth firms.

Second Case: Normal Firm (r = Ke)

Share value remains constant regardless of changes in dividend policies. Which means dividends and stock prices are free from each other.

Third Case: Declining Firm (r < Ke)

Share price tends to rise is correspondence with rise in dividend payout ratio. It means dividend and stock prices are positively correlated with each other in declining firm. (Gordon, 1962:484)

2.2.1.3 Modigliani and Miller's Approach

Modigliani and miller's 1961 article is the most comprehensive argument for irrelevant of dividends. They, for the first time in the history of corporate finance, declared that dividend policy does not affect the value of the firm. Modigliani and miller argued that, under a prefect market situation, the dividend policy of a firm is irrelevant as it does not affect the value of the firm. They suggested that the value of firm or shareholders wealth depends on the firm's earning which result from it investment policy. According to them, it can be concluded that dividend decision affects share price but not the shareholders' wealth. This implies that decrease in share price after dividend payment is offset by dividend amount received by the shareholder. Thus, the wealth of shareholders i.e. dividend plus terminal price remains unchanged.

The assumptions underlying MM's hypothesis are given below:

a. The firm operates in perfect capital markets where investors behave rationally, information is freely available to all and transactions and flotation coasts do not exit.

b. There are no taxes.

c. The firm has fixed investment policy, which is not subject to change.

d. Risk of uncertainty does not exist. This means that investors are able to forecast future prices and dividends with certainty, and one discount rate is appropriate for all securities and all time periods. Thus, $r=k=k_t$ for all t.

To provide the proof in support of their argument, we can present in the following steps.

Step 1:

The market price of the shares of the firm at the beginning of a period is defined as equal to the present value of dividend paid at the end of the period plus the market price at the end of the period. Symbolically,

$$P_o = \frac{D_1 + P_1}{1 + K_e}$$

Where,

P_o = Current market price per share,

K_e = Cost of equity capital (This rate is assumed to be constant)

D_1= Dividend per share at time 1.

P_1 = Market price share at time 1.

Step 2:

Multiplying both sides of equation (i) by the number of shares outstanding (n), we obtain the total value of the firm if no new financing exists.

$$nP_o = \frac{n(D_1 + P_1)}{1 + K_e}$$

Step 3:

If the firm sells number of new shares (Δn) at a time 1 at a price of P1 the value of the firm at time 0 will be.

$$nP_o = \frac{n(D_1 + P_1) + (\Delta nP_1 - \Delta n\Delta P_1)}{1 + K_e}$$

$$\text{Or, } nP_o = \frac{nD_1 + nP_1 + \Delta nP_1 - \Delta nP_1}{1 + K_e}$$

$$\text{Or, } nP_o = \frac{nD_1 + P_1(n + \Delta n) - \Delta nP_1}{1 + K_e}$$

Where,

n = No of share at the beginning.

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

Step 4:

If the investment proposal of a firm can be financed either by retained earning or the issuance of new shares or both. Thus the amount of new issue will be:

$\Delta nP_1 = 1- (E-nD_1)$

or, $\Delta nP_1 = 1- E+nD_1$

Where,

I= Total new investment during the period.

E= Earning of the firm during the period.

Step 5:

By substituting the value of ΔnP_1 from equation (iv) to equation (iii) we get,

$$nP_o = \frac{nD_1 + P_1(n + \Delta n) - (1 - E + nD_1)}{1 + K_e}$$

$$\text{Or, } nP_o = \frac{P_1(n + \Delta n) - 1 + E}{1 + K_e}$$

Step 6:

Since dividend does not appear directly in expression and E. I (n+ Δn) P_1 and K_e are assumed to be independent of dividend .MM conclude that dividend policy has no effect in the value of the firm. (Miller and Modigliani, 1961:441-443)

2.2.1.4 Mitchell and Mulherin's Study

In the article entitled "The Impact of Public Information on the Stock Market", they have studied the relation between the number of news announcements reported daily by Dow

Jones and company and aggregate measures of securities market activity including trading volume and market returns. They have a belief that much of the disagreement regarding the news-market relation is due to the differing emphasis of the various studies. They argue some research is concerned with firm specific news, while other studies analyze macroeconomic announcements. Some articles note the joint patterns of news and market activity, while others more directly study the actual relation between the news stories and market activity. Thus, they have tried to contribute to this debate by relating aggregate measures of market activity such as trading volume and market returns to the broad sample of macroeconomic and firm-specific news announcements released by Dow Jones and company.

For the analysis purpose they collected the number of announcements transmitted per day by Dow Jones and Company across the Broad Tape and in the wall street Journal. The data covered 2011 business days during 1983 to 1990. Likewise, they recorded trading volume, and calculated the absolute value of market returns and the sum of the absolute value of individual firm's returns from the New York Stock Exchange, American Stock Exchange and over the-counter. Their principal analysis was based on the correlation and regression coefficients. The news announcements were classified or stratified in to three categories according to the importance given by Dow Jones and Company. Then, they calculated correlation and regressions coefficients between the news announcements and market activity. To assess the robustness of their research result, they also considered non-information sources of market activity.

They found that the number of news stories and market activity is directly related and share common-day-of-week patterns. They also noted that the relation between news and market activity remains significant in regressions that control for the day of the week. The result was also robust even after the inclusion of non-information sources of market activity. (Mitchell and Mulherin, 1994:923-950)

2.2.1.5 **Berry and Howe's Study**

The article entitled "Public Information Arrival" attempted to investigate the rate of public information flow to see whether identifiable patterns exists that shed light on market volume and volatility relationships. In other words, Berry and Howe conducted a research to explore the patterns of information arrival and to see the impact of such information on volume and price of the securities. Their study differs from the study of Mitchell and Mulherin in that it

included not only firm specific and industry information, but also macro economic, political and international stories relevant to US financial markets. Furthermore, they emphasized the intraday arrival of public information and drew special attention to intraday patterns and their relation to measures of aggregate market activity such as trading volume and price volatility.

The data source was all news release sent by Reutor's News Service over their North American Securities News Wire during a year time period, from May 1990 to April 1991. The database included all informational events, not only firm-specific information, over the full 24 hour day. They selected the Reuter's News because it provides market participants with a timely source of information on news stories that influence financial markets.

In the first part their analysis; they documented the general patterns of public information, with an emphasis on the intraday arrival of information. Overall, they found that informational arrival is non-constant, displaying seasonality and distinct intraday patterns. For example: they found that informational arrival exhibits an inverted U-shape pattern across trading days, with Monday and Friday containing the fewest observation. The second part of their analysis focused on the relation between the public information variables and measures of intraday market activity. Herein, they suggested a positive, moderate relationship between public information and trading volume, but an insignificant relationship with price volatility. (Berry and Howe, 1994:1321-1345)

2.2.1.6 Van Horne and Mc Donald's Study

Van Horne and Mc Donald conducted a more comprehensive study on dividend policy and new equity financing. The purpose of this study was to investigate the combined effect of dividend policy and new equity financing on the market value of the firm's common stocks. For their study they selected two industries, electric and electronic firms, they performed empirical study by testing empirical study by testing two regressions for the electric utilities and one regression model. From their study they concluded that for electric utility firms share value was adversely affected by new equity financing in the presence of cash dividend except for those firms in the highest new issue group and it made new equity a more costly form of financing than the retention of earning. They also indicated that the payment of dividend through excessive equity financing reduces share prices (Van Horne Donald, 1971:507-519).

2.2.1.7 Chawala and Srinivasan's Study

Chawala and Srinivasan studied that the impact of dividend and retention on share price. They took 18 chemicals and 13 sugar companies and estimated cross section relationship. The basic objectives of the study were:

To set a model to explain share price, dividend and retained earnings relationship.

To test the dividend and retained earnings hypothesis.

To examine the structural changes in estimated relations overtime.

To achieve these objectives, they used simultaneous equation model as developed by friend and Puckett in 1964. They used Price function and dividend d supply function for their study. They used least square technique for estimation. In the case of chemical industry they found that the estimated coefficient and the coefficient of determination of all the questions were very high. It implies that the stock price and dividend supply variations can be explained by their independent variables. However in the case of sugar industry they found that the sign for the retained earnings in negative.

Finally they concluded that the dividend hypothesis holds good in the chemical industry. Both dividend and retained earnings significantly explain the variations in share price and chemical industry (Chawala, 1987: 137-140).

2.2.1.8 Linter's Study

Linter's Study (1956) has focused on the behavioral aspect of dividend policy in the American context he investigated a partial adjustment model as he tested the dividend patterns of twenty companies he concluded that a major portion of the dividend of a firm could be expressed in the following.

$DIV_t = a + bDIV^*_t + DIV_{t-1}(1-b) + c_1,$

Where,

DIV^*_t= Desired payment of firm

EPS_t = t earnings

P = Payout ratio

a = constant relating to dividend growth

b = Adjustment factor relating to the previous period dividend and new desired level of dividends where b<1.

The major findings of this study are as follows:

Firms generally think in terms of proportion of earnings to be paid out.

Firms generally have target payout ratios in view while determining change in dividend per share

Investment requirement are not considered for modifying the pattern of dividend behavior (Linter 1956:97-113).

2.2.1.9 Tinbergen's Study

Firstly, in 1939, Tinbergen studied the dynamics of share-price formation, where a linear regression model was used to test the dynamic static law. It describes that the share price is dependent on dividends, interest rates, and the share price growth rate. The study found that share prices follow the dynamic law for most of the countries and periods involved in the study. However, he did not account for liquidity in explaining share price variability. (Tinbergen, 1939:153-160)

2.2.1.10 King's Study

In 1966, King studied the major factors determining the stock prices. Running the multivariate analysis, this study of 63 firms listed on the NYSE found that, on an average, 31 percent of the variation in a stock's price could be attributed to change in the level of the whole stock market and 20 percent to change peculiar to each firm, which were assumed to come from within the firm. The statistics were varied from industry to industry. The study concluded that fundamental analysts must be able to forecast many factors that might introduce volatility into stock price if they are to time their trades advantageously. (King, 1966:139-190)

2.2.1.11 Ball and Brown's Study

In 1968, Ball and Brown measured the impact of earnings announcements on share price and the new information contained therein. Ball and Brown's study looked at the impact of the release of the annual report announcement of 261 American firms on share prices in the period 1957-65. The study concluded: a) That of all the information about an individual firm, which becomes available during a year, one half or more is captured in that year's reported earning figure, and b) That of all the information contained in reported income, no more than about 10-15% has not been anticipated by the month of report. The actual release of the earnings announcement by the firms had relatively little impact on share prices. From Ball and browns study some commentators have concluded that annual account are of smallish use in helping existing and potential shareholders to evaluate future share prices for securities. Clearly, investors have been using other information to help predict financial performance ahead of their publication in the annual accounts. (Ball & Brown, 1968:159-178)

2.2.1.12 Fama, Fisher, Jensen and Roll's Study

By using market model to calculate the expected proportionate change in stock price, then engaged a study by Fama, Fisher, Jensen and Roll (1969). The study investigated the "Information Contained in stock split and found that the stock split in themselves had no influences on share price movements although they were associated with cash dividend increases which did increase share prices. Further, the study found that the stock market had completely discounted the impact of the dividend increases ahead of the split. The Fama, Fisher, Jensen and Roll study, in particular, demonstrates that prices reflect not only direct estimates of prospective performance by the sample companies, but also information that requires more subtle interpretation. (Fama, Fisher, Jensen and Roll, 1969).

2.2.1.13 Bower and Bower's Study

In 1970, Bower and Bower tested a stock valuation model using a regression modeling approach. The study included risk, profit, and expectations in modeling the stock price. The results obtained from cross-sectional regression showed that a better explanation of stock price can be obtained by separating the total risk into its systematic and residual elements. The test showed the dependence of stock values on expected profitability and growth, risk, and liquidity. (Bower & Bower, 1970:483-492)

2.2.1.14 Ofer's Study

In 1975, Ofer conducted study on investor's expectations of earnings growth. The objective of the study was to examine and evaluate investors' growth expectations. The researcher defined the stock price to be a linear function of the risk and the expected growth in accordance with the literature on stock valuation and used five measures to evaluate the risk associated with the firm. These are the beta coefficient, the firm asset size, the dividend payout ratio, the leverage, and the earnings variability. The beta coefficient measures the systematic component of the total risk of a security. The most significant variables were earnings variability, past growth rate, and dividend payout ratio. The study showed that profitability and investors' expectations of changes in growth rates affect the stock price. (Ofer, 1975:889-911)

2.2.1.15 Firth's Study

Based on the market model but eliminating the value of intercept to calculate expected proportionate change in stock price, Michael Firth (1976) concluded that investors uses the information contained in the announcement of financial and accounting result to reevaluate the share prices not only of the company whose result are being announced, but also of closely competing companies. Further suggested that financial results released by firm are important in portfolio decision taking. (Firth, 1976:296-306)

2.2.1.16 Basu's Study

Basu (1977 and 1983) reported that both earnings-to-price and firm size are significant factors in determining average returns among US listed firms. The study also showed that market beta is positively related to stock returns. Basu documented the use of price/earnings ratios to forecast stock returns. In a study of 1400 firms over the period 1956-71, the study observed low P/E securities outperforming their high P/E counterparts by more than seven percent per year. Though this result could be interpreted as a challenge to the CAPM benchmark that employed, Basu regards his results as indicative of market inefficiency: "Securities trading at different multiples of earnings, on average, to have been inappropriately priced in comparison with one another, and opportunities for earning "abnormal" returns were afforded to investors." (Basu, 1977:663-682)

2.2.1.17 Shiller's Study

In 1881, Shiller examined the variation in stock market prices, and finds that price fluctuations are too large to be justified by the subsequent variation in dividend payments. Shiller finds that measures of stock price volatility over the past century appear to be far too high - five to thirteen times too high - to be attributed to new information about future real dividends. (Shiller, 1981:421-436)

2.2.1.18 Chen, Roll and Ross's Study

In 1986, Chen, Roll and Ross showed the stock price volatility only to the change in fundamentals. The study investigated the reaction of the stock market to "innovation" in macroeconomic variables. The study recalls that according to the financial theory, assets prices should be systematically affected by several factors, with innovations in spread between long and short interest rates, expected and unexpected inflation, industrial production and spread between high and low grade bonds considered a source of investment risk. A set of state economic variables is chosen to be candidates for source of systematic risk. Several of those variables were then found to be statistically significant in explaining expected return. The most of risk appeared to be innovations in industrial production, changes in risk premium, and twists in the yield curve. The most surprising conclusion from the study was that although the stock market index explains a large proportion of the stock return variability, its influence is weak compared to the changes in state economic variables. The main inference was that the stock returns are determined by the economic news measured as innovations in state variables. (Chen, Roll & Ross, 1986:383-403)

2.2.1.19 Fama and French's Study

In 1992, Fama and French showed that two variables capture much of the cross-sectional variation in stock returns over the period 1963-1990. The main finding of Fama and French is that market capitalization and book-to-market equity subsume the impact not only of these two variables but also of price/earnings ratios and leverage. (Fama & French, 1992:427-465)

2.2.1.20 Chu's Study

In 1997, Chu conducted a study on the impact of earnings, dividends, and cash flows on stock returns. The study was a case study of the Taiwan market that presented opportunity for differentiation among previous studies done on United States markets. The stock return was defined first as a function of net income, then as a function of dividends, and after as a function of cash flows. The results show that stock prices are positively related to net income, positively correlated to cash flows, but uncorrelated to the information of cash dividends which differs from what happens in the United States. This suggests that investors' stock pricing decisions are based on the firm's earnings, dividends and cash flows. Investors appreciate stock dividends because the retained cash flows may create more favorable future earnings. (Chu,1997:181-202)

2.2.1.21 Sias's Study

In 1997, Sias conducted research on the sensitivity of individual and institutional investors' expectations to changing market conditions using a regression model. The study was conducted on closed-end funds. The aim was to investigate whether Institutional and individual investors respond differently to changes in market conditions. Closed-end funds were used because their shares, primarily held by individual investors and the underlying assets held by institutional investors, are subject to the same stream of distribution. The results showed that variations in market conditions influence individual as well as institutional investors. Individual investors appeared to be more sensitive to consumption growth across bond and specialized funds, the default premium for diversified funds, the real Treasury bill rate for the bond fund, the slope of the yield curve for bond funds, and the unanticipated inflation for specialized and diversified stock fund. Those results suggest that individual investors' expectations are more sensitive to changes in market conditions than institutional investors' expectations. Consequently, a change in the market conditions results in a larger change in share prices than the underlying assets. (Sias, 1997:245-69)

2.2.1.22 Van Eaton's Study

In 1999, Van Eaton studied how stock prices adjust to the information in dividend changes. The study examined the abnormal returns after dividend resumption for firms that had not paid dividends for at least two years and post-announcement returns for firms announcing dividend increases and decreases. The study found significant negative post

announcement abnormal returns over the post-announcement year for firms that decreased dividends and those that omit their dividends. The results suggested that investors are sensitive to dividends when valuing the stock of a firm. Dividends reflect the profitability and the expected growth of a firm. This implies that investors' valuation of companies' equity might depend upon the firm's profitability and expected growth. (Van Eaton, 1999:113-133)

2.2.1.23 Radhe S. Pradhan's Study

Of all studies conducted on the capital market of Nepal. Dr. Radhe Shyam Pradhan's study is an outstanding one. The study conducted by him was based on the data collected for 17 enterprises from 1986 to 1990 and appropriate topic selected for the study was "Stock Market Behavior in small capital Market" .In this study of stock market behavior in Share capital Market 1992 the data were collected from 17 enterprises covering the year between 1986 to 1990.He as attempted to assess some of cross section behavior of the stock market. This examines the relationship of market equity market value to book value price earning and dividend with liquidity, profitability leverage, assets turnover and interest coverage. The main objective of the study was as follows.

To assess the stock market behavior in Nepal.

To assess the relationship of market equity, market value to book value, profitability leverage, price earnings, and dividend with liquidity assets turnover and interest coverage.

Following findings were observed in the connection with dividend behavior:

Higher the earnings on stock leads larger the ratio of dividends per share.

Stock with larger ratio of dividend per share to market price per share has higher liquidity. Liquidity position of stocks. Paying lower dividends is also more variable as compared to stock paying higher dividends.

Positive relationship between the ratio of dividend per share to market price per share and interest coverage.

Dividend per share and market price per share were positively correlated.

Positive relationship between dividend payout and liquidity.

Positive relationship between dividend payout and profitability

Positive relationship between dividend payout and turnover ratios.

Positive relationship between dividend payout and interest coverage.

Positive relationship between dividend payout and interest.

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

2.2.1.24 Manohar Krishna's Shrestha Study

Dr. Shrestha has carried out a book in 1992 has highlighted, and expressed views on contemporary issues of dividend policies and practices in Nepal. There are many anomalies in capital market and management of public limited companies, which have fed up the shareholders. Stock Exchange center is only taking body for the shareholder. Which is revealed by number of instantaneous public limited companies are dong almost opposite of commitment made in prospectus.

In 1992,he presented a paper on "*Shareholder's Democracy and Annual General Meeting Feedback*" on fifth annual general meeting of Nepal Arab Bank Ltd, which has been presented here.

In his view, the common problems and constraints of the shareholders are as follows:

i. The cost-push inflation at exorbitant rate has made the shareholders to expect higher return from their investment.

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

iii. Erosion in the purchasing power of the income has made it clear that dividend payment must be directed to enhance shareholder's purchasing power by raising dividend payment ratio on the basis of both earnings and cost theory.

iv. Indo-Nepal trade and transit deadlock has become a sort of economic welfare putting rise in the cost of living index to a considerable extent. This is the reason, which made shareholders to expect higher demand for satisfactory dividend.

v. The waiting of 5 years with payment of dividend in previous years is equally a strong enforceable reason of the bank's shareholders to expect handsome dividend already assumed and committed in various reports of the earlier annual general meeting.

vi. One way to encourage risk taking ability and preference is to have proper risk return trade off by bank's management board is a way that higher return must be the investment rule for higher risk takers that comprise bank's shareholders.

2.2.1.25 Kamal Das Manandhar's Study

Kamal Das Manandhar in 2000 conducted a study on "*Bonus Share and Dividend Changes empirical Analysis in Nepalese Context"* to test the lagged structure of dividend and different hypothesis on relationship of dividend payout and other financial factors were tested. He carried out his study based on the data taken from 17 Nepalese corporate firms and covered the period of 1987 to 1998.

The conclusions of his study are as follows:

i. There is significant relationship between changes in dividend policy in terms of DPS and change in lagged earnings.

ii. In overall there is positive relationship between change in lagged consecutive earnings and dividend per share.

iii. There is relationship between distributed lag profits and dividend.

iv. When change in lagged consecutive earnings is greater than zero in 65% the cases change in dividend per share.

v. There is relationship between distributed lag profits and dividend.

vi. When change in lagged consecutive earnings is greater than zero in 65% the cases change in dividend per share.

vii. Overall increase in EPS (t) has resulted to the dividend payout in 66.6% of the cases while in others decrease in EPS result decreases in dividend payments.

viii. Nepalese corporate firms have followed the practice of maintaining constant dividend payment per share.

ix. Corporate firm do not take into account that one-year and two year lagged earnings. (Manandhar, Journal, 2000:5-12)

2.2.1.26 Dr. Govind Bahadur Thapa

In Dr. Govind Bahadur Thapa's opinion that commercial banks including foreign joint venture banks seems to be doing pretty well in mobilizing deposits. Similarly, loans and advances of these banks are also in an increasing trend. Nevertheless, compared to the high credit needs, particularly by the newly emerging industries, the bank still seems to lack adequate funds for investments. The banks are increasing their lending to non-traditional sectors along with the traditional sectors.

Among several commercial banks, Nepal Bank Ltd. And Rastriya Banijya Bank is the only two that are operating with a nominal profit and sometimes incurring losses. Due to non-recovery of accrued interest, the margin between interest income and interest expenses is declining. These banks have not been able to increase their income from commission and discount through traditional off-balance sheet operations. On the other hand, they have heavy burden of personnel and administrative overheads. Similarly, profit position of these banks has been seriously affected due to excessive accumulation of overdue and defaulting loans. Contrary to this, the foreign joint venture banks have been operating efficiently. They are making tremendous amount of profits and are distributing a large portion of it to its shareholders and employees as dividends and bonus. Because of their effective persuasion for loan recovery and management, overdue and defaulting loans have been limited resulting in high margins between interest income and interest expenses. Similarly, concentration of these banks in modern off-balance sheet activities and efficient personnel management has added to the maximization of their profits. (Thapa, Journal, 1994:29-37)

2.2.2 Review of Thesis

2.2.2.1 Nabaraj Adhikari's *(1999)* Study covered the period from 1990 to 1996 with total observations of 47 in financial sectors and 30 non- financial sectors.

This study has used both primary and secondary data. The major objective of this study was to Asses corporate dividend practices in Nepal. The specific objectives were as follows.

i. To analyze the properties of portfolios formed on dividends.

ii. To examine the relationship between dividends & stock prices.

iii. To survey the opinions of financial executives on corporate dividend practices.

The major conclusions, of this research study were as follows:

It is observed that there are differences in financial position of high dividend paying and low dividend paying and low dividend paying companies. Other things remaining the same, financial position of high dividend paying companies is comparatively better than that of low dividend paying companies. Thus 'Dividends affect the market price of share' is the major conclusion of this study.

Likewise, the other findings based on primary data are given below:

i. The price of common stock was induced by dividend payout ratio.

ii. Nepalese shareholders were not really indifferent towards payment or nonpayment of dividend.

iii. The majority of the respondents feel that the major motives to pay cash dividend was to convey information to shareholders that the company is in good position.

iv. As regards dividend as a residual decision, the majority of the respondents

feel that it was not a residual decision.

With respect to factors affecting corporate, the majority of the respondents give the first priority to 'earning', the second priority to 'availability of cash', the third priority to 'past dividends' & fourth priority to 'concern about maintaining or increasing stock price'.

2.2.2.2 Sadakar Timilsina (1997) conducted his master's research on *"Dividends and Stock Prices: An Empirical Study"* conducted by using the data of 16 enterprises for the period of 1990 to 1994 has the following objectives:

i. To test the relationship between DPS and Stock Prices.

ii. To determine the impact of dividend policy on stock prices.

iii. To identify whether it is possible to increase the market value of the stock changing dividend policy or payout ratio.

To explain the behavior, he used multiple regression models of three independent variables as developed by Friend and Puckett. Further he tired to highlight the relationship between stock price and other independent variables setting separate simple linear regression equations. The findings of the study are as follow:

i. The relationship between DPS and stock prices is positive in the sample companies.

ii. DPS affects the share prices variably in different sectors.

iii. Changing the dividend policy of dividend per share might help to increase the market price of share.

iv. The relationship between stock prices and retained earnings per share is not prominent.

v. The relationship between stock prices and lagged earnings price ratio is negative.

2.2.2.3 Rishi Raj Gautam (1996) conducted his master's research on *"A Comparative Study of Dividend Policy of Commercial Banks"* by using the secondary data of three banks in 1996 has the following objectives:

i. To identify what type of dividend policy is being followed and find out whether the policy followed is appropriate or not.

ii. To examine the impact of dividend on share prices.

iii. To identify the relationship between DPS and other financial indicators.

iv. To know if there is any uniformity among DPS, EPS and DPR of the three sample commercial banks.

He collected all the relevant data of the three commercial banks and used various statistical analytical tools like correlation and regression. The findings of the study are as follow:

i. Correlation coefficient between EPS and MPS has positive relationship.

ii. Last year dividend makes positive effect on current share price.

2.3. Concluding Remarks

Capital market absorbs the information regarding share price fluctuation and reacts to a variety of combinations of simultaneous information while determining the price of stock. This information are treated as signals, which are some released by the managers of companies in an uncertain economic environment characterized by informational asymmetry and other by uncertain economic forces and interpreted as best they can by investors. Investors hold these underlying premises and go to the open market, where buyers and sellers agree to settle on a market price to their stocks. During the process whatever the price is discovered for a stock, it simply the outcome of either dividend or earnings or leverage or net worth or many more or combination of all.

2.4. Research Gap

It has been commonly noted that the stock price determinants differs considerably from time to time, across stock exchange and among countries. Many of the studies have found mismatch results while testing the each of the theory presented above. The results obtained by the researchers revealed that the validity of each theory exists in the capital market; if and only if there exist: 1) Reaction to the announcement per se, 2) Information contained in the announcement, 3) Signals about future expectations, and 4) Information asymmetry. Though, there are these findings in context of developed capital markets, no such studies

CHAPTER: III

RESEARCH METHODOLOGY

This chapter has been divided into four sections. The section one presents the research design of the study while section two deals with the population and sample selection. The section three consists of the sources of data. Whereas, the section four contain the data analysis tools.

3.1. Research Design

The research design is the plan, structure, and strategy of investigation conceived so as to obtain answers to research question and to control variance (Kerlinger, 1986). It refers to the entire process of planning and carrying out a research study (Wolff and Pant, 2000). It describes the general plan for collecting, analyzing and evaluating data after identifying: 1) what the researcher want to know, and 2) what has to be dealt with in order to obtain required information. In order to conduct this study, descriptive cum analytical research design has been adopted. However, descriptive research design has been utilized mainly for conceptualization of the problem whilst analytical research design has been followed to analyze the functional relationship between stock price and return of its various determinants.

3.2. Population and Sample Selection

There were 224 companies which were listed in the year 2008/09 in NEPSE. This is considered as a population for the study. Out of 21 commercial banks listed in equity stocks, 8 commercial banks actively traded in Nepal Stock Exchange during beginning of Mid-July 2001 to ending of Mid-July 2009, viz., Nabil Bank Limited, Nepal Investment Bank Limited, Standard Chartered Bank Nepal Limited, Himalayan Bank Limited, Nepal SBI Bank Limited, Nepal Everest Bank Limited, Bank of Kathmandu Limited and Nepal Industrial & Commercial Bank Limited constitute the sample for the present study. More details about sample are presented in

Table 3.1: List of Companies Included in Sample

S. N.	Name of Companies
1	Nabil Bank Limited
2	Nepal Investment Bank Limited
3	Standard Chartered Bank Nepal
4	Himalayan Bank Nepal
5	Nepal SBI Bank Limited
6	Everest Bank Limited
7	Bank of Kathmandu Limited
8	Nepal Industrial & Commercial Bank Limited

Source: Securities Board, Nepal

There are 64(8x8) observations available under the econometric model to explain the relationship between stock price and its determinant variables.

Table 3.2: No. of Observations included in Sample

Name of Companies	Year Selected for Study	No. of Obser.
Nabil Bank Limited	2000/01 to 2007/08	8
Nepal Investment Bank Limited	2000/01 to 2007/08	8
Standard Chartered Bank Nepal	2000/01 to 2007/08	8
Himalayan Bank Nepal	2000/01 to 2007/08	8
Nepal SBI Bank Limited	2000/01 to 2007/08	8
Everest Bank Limited	2000/01 to 2007/08	8
Bank of Kathmandu Limited	2000/01 to 2007/08	8
Nepal Industrial & Commercial Bank Ltd.	2000/01 to 2007/08	8
Total No. of Observation	2000/01 to 2007/08	64

Source: Securities Board, Nepal

While selection of the sample adequate care has been taken the study period, i.e., from beginning of Mid-July 2000 to ending of Mid-July 2008. Further care has been taken to exclude the stocks, which have changed their nominal value during the study period. As such, all the 8 stocks selected for the present study corroborates the above two criteria. Selected stocks were collected for the study period from the various volumes of Annual Trading Reports available from SEBO/N for the purpose of analysis.

Similarly, proper precaution has been taken while selecting the key independent variable to explain the share prices and the returns. For each of variables, some statistical tests were

conducted-called descriptive statistics and correlation matrix. Under the descriptive statistics, there are 56 valid observations.

The correlation matrix provides an indication of the potential relationships and an option to cancel insignificant explanatory variables from the model. Looking at the independent variables (referring **Table 3.1**), some variables interrelate quite significantly to one and other. This multicollinearity leads to disturbances while estimating the betas. For example: Referring to **Table 3.1**, the stock price is influenced significantly by the variables like as ROE, ROA, EPS to MPS ratio and DPS. Such influences have been found statistically significant at 1% alpha with one variable: EPS to MPS ratio and significant at 5% alpha with another three Variables: ROE, ROA and DPS. A selection of a ROE in the model to explain the relationship with stock price along with ROA, P/E ratio, total debt to total assets ratio, NWTA ratio and DPS introduces the multicollinearity. Because there is significant association between ROE and N/W to P/E ratio, total debt to total assets ratio, NWTA ratio and DPS.

Table 3.3: Correlations Matrix Between the Variables

Variables	Statistics	MPS	Return	ROE	ROA	P/E Ratio	EPS to MPS Ratio	TDTA Ratio	NWTA Ratio	SODTA Ratio	TDER	DPS
MPS	Pear. Corr.	1	-.334(*)	.552(**)	.571(**)	0.068	-.321(*)	0.048	-0.048	-0.143	-0.034	.593(**)
	Sig.		0.012	0	0	0.619	0.016	0.727	0.726	0.292	0.806	0
Return	Pear. Corr.	-.334(*)	1	-.344(**)	-.462(**)	0.203	0.146	0.042	-0.042	-.376(**)	0.162	-0.162
	Sig.	0.012		0.009	0	0.134	0.282	0.758	0.759	0.004	0.234	0.232
ROE	Pear. Corr.	.552(**)	-.344(**)	1	.893(**)	-.415(**)	.336(*)	.360(**)	-.360(**)	-0.132	.277(*)	.687(**)
	Sig.	0	0.009		0	0.001	0.011	0.006	0.006	0.331	0.039	0
ROA	Pear. Corr.	.571(**)	-.462(**)	.893(**)	1	-.341(*)	0.256	-0.024	0.024	-0.08	-0.133	.698(**)
	Sig.	0	0	0		0.01	0.056	0.859	0.861	0.557	0.329	0
P/E Ratio	Pear. Corr.	0.068	0.203	-.415(**)	-.341(*)	1	-.664(**)	-.455(**)	.455(**)	-0.023	-.367(**)	-0.187
	Sig.	0.619	0.134	0.001	0.01		0	0	0	0.869	0.005	0.167
EPS to MPS Ratio	Pear. Corr.	-.321(*)	0.146	.336(*)	0.256	-.664(**)	1	.264(*)	-.265(*)	-0.139	0.262	.292(*)
	Sig.	0.016	0.282	0.011	0.056	0		0.049	0.049	0.308	0.051	0.029
TDTA Ratio	Pear. Corr.	0.048	0.042	.360(**)	-0.024	-.455(**)	.264(*)	1	-1.000(**)	-0.078	.919(**)	0.018
	Sig.	0.727	0.758	0.006	0.859	0	0.049		0	0.568	0	0.896
NWTA	Pear. Corr.	-0.048	-0.042	-.360(**)	0.024	.455(**)	-.265(*)	-1.000(**)	1	0.078	-.919(**)	-0.018
	Sig.	0.726	0.759	0.006	0.861	0	0.049	0		0.567	0	0.894
SODTA Ratio	Pear. Corr.	-0.143	-.376(**)	-0.132	-0.08	-0.023	-0.139	-0.078	0.078	1	-0.099	-.335(*)
	Sig.	0.292	0.004	0.331	0.557	0.869	0.308	0.568	0.567		0.468	0.012
TDTR	Pear. Corr.	-0.034	0.162	.277(*)	-0.133	-.367(**)	0.262	.919(**)	-.919(**)	-0.099	1	-0.032
	Sig.	0.806	0.234	0.039	0.329	0.005	0.051	0	0	0.468		0.813
DPS	Pear. Corr.	.593(**)	-0.162	.687(**)	.698(**)	-0.187	.292(*)	0.018	-0.018	-.335(*)	-0.032	1
	Sig.	0	0.232	0	0	0.167	0.029	0.896	0.894	0.012	0.813	

Source: Appendix-1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Based on the correlation matrix, the cluster of the independent variables explaining the stock price and stock return (separately) has been detailed as follows for the further study.

Table 3.4: List of Variables Used in Explaining Stock Prices

Dependent Variables	Independent variables
Share Price	ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio
Return	ROA and SODTA ratio

Source: Appendix-1

Except for the above independent variables, one more independent variable, market return has also been considered in the study.

3.3. Sources of Data

This study is primarily based on secondary sources of data. The study requires data on cash dividend paid, net worth, total debt, total assets, net profit, earning per share, and the stock price of company. Similarly, the data on market index also requires in the study. The data covers the period from 2000/01 to 2007/08. The sources of these data are as follows:

1) Trading Report published by Security Board of Nepal (SEBO/N).
2) Balance Sheet and Profit and Loss Account of listed companies published by SEBO/N.
3) Booklets published by SEBO/N.
4) Outside published material directly related to topic.
5) Previous Research Studies, Dissertation and Articles on the topic.
6) Website of NEPSE Ltd: http:// www.nepalstock.com
7) Website Of SEBO/N: http:// ww.sebonp.com
8) Search website: http://www.google.com

3.4. Data Analysis

The following statistical tools are used in the study:

3.4.1 Arithmetic Mean or Average ($\bar{X}$)

An average is the value, which represents a group of values. It depicts the characteristic of the whole group. It is an envoy of the entire mass of homogeneous data. Generally the average value lies somewhere in between the two extremes, i.e. the largest and the smallest items. It is calculated as follows.

$$\text{Arithmetic Mean}(\bar{X}) = \frac{x1 + x2 + x3 + \cdots \ldots\ldots\ldots\ldots\ldots + x4}{N}$$

$$\sigma\tau\,(\bar{X}) = \frac{\Sigma X}{N}$$

Where,

N= number of items

Σx = Sum of size of the items

3.4.2 Standard Deviation (σ)

Karl Person first introduced the concept the concept of standard deviation in 1983. Standard deviation is the positive square root of the arithmetic average of the squares of all the squares of all the deviation measured from the arithmetic average of the series. The standard deviation measures the absolute dispersion of a distribution. The greater the amount of dispersion the greater the standard derivation, i.e. greater will be the magnitude of the greater the values from their mean. A small standard deviation means a high degree of uniformity of the observation as homogeneity of a series. Standard Deviation is by a Greek letter 'σ' (Sigma) and is calculated as follows.

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\Sigma X^2}{n} - \left(\frac{\Sigma X}{n}\right)^2}$$

Where,

N = Number of items in the series.

X = mean

X = Variable

3.4.3 Coefficient of variation (C.V.)

It is the measurement of the relative dispersion developed by Karl Pearson. It is used to compare the variability of two or more series. "The coefficient of variation is the relative measure of dispersion, comparable across distribution which is defined as the ratio of the standard deviation to the mean expressed in percent". The series with higher coefficient of variation is said to be more variable, less consistent, less uniform, less stable and less homogenous. On the contrary the series with less coefficient of variation is said to be less variable, more consistent, more uniform, more stable and more homogenous. It is denoted by C.V. and is obtained by dividing the standard deviation by arithmetic mean. Thus,

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

Where,

SD = standard Deviation

$\bar{X}$= Mean average

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

3.4.4 The Econometric Models

The Capital Asset Pricing Model known as market model/ordinary least square method of identifying the degree of affection of market return on stock return developed. It is also known as one factor model developed by Sharpe (1964) and Lintner (1965) is expressed as follows:

$$E(r_{it}) = f(r_{mt})$$

Where,

$f_1 > 0$ *and*,
r_{it} = *Random* Return *on Security i at t period*
r_{mt} = *Random* Return *on Market portfolio i at t period*

Mathematically, the above functional relationship is expressed as follows:

$$E(r_{it}) = a_{it} + \quad_{it} r_{mt} + U_{Eit}$$

Where,

r_{it} = *Random* Return *on Security i at t period*
r_{mt} = *Random* Return *on Market portfolio i at t period*
a_{it} *and* $_{it}$ = *Parameters that are Estimated by Least Square Method Known as Y* intercept *and Slope of* security *i at t period*
U_{Eit} = *Disterbance / Error Term in i Security at t Period*

In this study, the return on that stock j for the time period t is calculated based on the same formula specified above. Whereas the return on the market for the time period t is calculated by using the following formula:

$$r_{m,t} = \frac{I_{m,t} - I_{m,t-1}}{I_{m,t-1}}$$

Where,

$r_{m,t}$ = Return *on market at Period t*
$I_{m,t}$ = *Market* Price *at Period t*
$I_{m,t-1}$ = *Market at Period* $t-1$

The econometric model (known as multiple regression) used in the study describes the functional relationship between stock price (Dependent variables) and independent variables (ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio). In addition, it describes also the functional relationship between stock return (dependent variable) and independent variables (ROA and SODTA ratio) and tests the robustness of the result before making any findings and conclusions. The detailed model description is given below:

$$MPS_{it} = f(ROA_{it}, EPStoMPS_{it}, SODTA_{it}, DPS_{it}, NWTA_{it})$$

Where,

$f_1, f_2, f_3, f_4, f_5 > 0$ *and* ,
MPS_{it} = *Market Price Per Stock of i Security at t Period*
ROA_{it} = *Return of Asset sofi Security attperi od*
$EPStoMPS_{it}$ = *Earningper Shareto Market Price per Share of i Security attPeriod*
$SODTA_{it}$ = *Subordinat eDebtto Total Assets of i Security attPeriod*
DPS_{it} = *Dividend per Share of i Security att Period*
$NWTA_{it}$ = *Net Worth to Total Assets of i Security at t Period*

Mathematically, the above functional relationship is expressed as follows:

$$MPS_{it} = b_{0it} + b_{1it} ROA_{it} + b_{2it} EPStoMPS_{it} + b_{3it} SODTA_{it} + b_{4it} DPS_{it} + b_{5it} NWTA_{it} + U_{Eit}$$

Where,

MPS_{it} = *Market Price Per Share of i Security at t Period*
$b_{0it}, b_{1it}, b_{2it}, b_{3it}, b_{4it}, b_{5it}$ = *Betas of independent variables Explaining i Security at t Period*
ROAit = *Return on Asset sofi Security attperi od*
EPStoMPSit = *Earningper Share to Market ketprice per Share of i Security att Period*
SODTAit = *Subordinat eDebtto Total Assets of i Securitya ttPeriod*
DPS_{it} = *Dividend Per Share of i Seciruty at t Period*
$NWTA_{it}$ = *Net Worth to Total Assets Ratio of i Security at t Period*
U_{Eit} = *Disterbanc e / Error Term in i Security at t Period*

Similarly, to test the functional relationship between stock return and independent variables, the detailed model is described below:

$$r_{it} = f(ROA_{it}, SODTA_{it})$$

Where,

$f_1, f_2, > 0$ *and* ,
r_{it} = *Return of i Security at t Period*
ROA_{it} = *Return on Asset s of i Security at t Period*
$SODTA_{it}$ = *Subordinat eDebtto Total Assets of i Security at t Period*

Mathematically the above functional relationship is expressed as follows:

$$r_{it} = b_{0it} + b_{1it} ROA_{it} + b_{2it} SODTA_{it} + U_{Eit}$$

Where,

r_{it} = Return on i Security at t Period
$b_{0it}, b_{1it}, b_{2it}$ = Betas of independent variables Explaining i Security at t Period
ROA_{it} = Return on Assets of i Security at t Period
$SODTA_{it}$ = Subordinate Debt to Total Assets of i Seciruty at t Period
U_{Eit} = Disterbance / Error Term in i Security at t Period

The above three models describe the linear relationship between the dependent variables and the explanatory variables. The models are not built upon a direct cause and effect relationship but are a test scheme to estimate the beta coefficient from the *ex post* data in the absence of the *ex ante* data. The expectation is that all betas will have positive signs. That implies that the higher the level of market return will lead more positively the return and the higher levels of ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio will lead more positively the share price. Similarly, the higher level of ROA and SODTA ratio will lead more positively the return. The greater the magnitude of the coefficients, the more likely the average price of the share will affect.

In this study, the return on a stock i for time period t is calculated based on the same formula specified above. While as the value of the others variables like as return on security, ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio, ROA and SODTA ratio on a stock i for time period t are calculated by using following formula:

This study is also based on study of correlation, coefficient of determination, “t”-statistics, “f”–statistics, and standard error. However, completely the study is based on Microsoft Excel and SPSS data processing software.

3.5. Limitation of the Study

The limitations of the study are as follows:

1. The selection of population and sample size: The populations for the study were included 235 equity stocks listed in NEPSE in year 2007/08. While as only eight equity stocks were selected as a sample. The study period covers from 2000/01 to 2007/08 only.

2. The selection of variables: There were so many variables affecting the stock price and return but only seven mostly used variables have been considered into the study based on literature review.

3. The equity and preferred stock capital plus shareholders reserves only were included in calculating the shareholders equity/net worth. Similarly, the deferred liabilities of the balance sheet and specified as long-term loan by the company on balance sheet were only included in long term liability.

This may possibly introduce error in the study. However, it is not likely to impair the findings of the study.

3.6. Definition of Key Terms

The terminologies used in this study and their definitions are as follows:

Bubbles arise usually in case of explosive return series when assets price rise in response to expectation about higher price in future due to non-fundamental reasons, not due to fundamental, e.g., the news about dividends.

Fads or Overreactions occurs in the case of high correlation between bubbles and fundamentals. 'Fads' model assumes all economics agents are rational, but that there exist 'noise traders' who buy and sell stock for 'irrational' exogenous or psychological reasons. 'Fads' model argues that the trading by naive investors create the non-diversifiable risk that sophisticated investors must take into account.

Feedback Traders are a type of stock market investors, with adaptive expectations. They base their assets decision on the past history of the market.

Learning Effects consists in that agents estimate parameters of the market each time the new information arrives. This is a small sample problem, which disappears when agents have full assess to the information. In case of incomplete information, market participation can't determine the reaction between the past and future events, resulting in a high volatility of assets prices as a large learning effect.

Noise or irrational Traders are a type of stock market investors who behave irrationally. They do not quote price to fundamental values, but act rather for some psychological reasons of the state of the mood.

Return measures the relative change in stock price for two successive periods.

CHAPTER: IV

PRESENTATION AND ANALYSIS OF DATA

In this chapter, to achieve the objectives, which are set in introduction chapter, the relevant data and its impact on stock price of commercial banks are presented. Presentation and analysis of data in the study, using the various financial variables and statistical tools discussed in "Research Methodology"

4.1 Presentation of Financial Variables

4.1.1Analysis of MPS

The average MPS of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 2251.25, 1235.50, 3241.13, 1239.50, 762.13, 1264.50, 825.25, and 522.25 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 1933.37 and higher C.V. 83.35 and lower S.D. 364.75 and lower C.V. 33.36. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa.

Table 4.1: The Market Price per Share of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.(%)
		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08			
		057/058	058/059	059/060	060/061	061/062	062/063	063/064	064/065			
1	NABIL	1500	700	740	1000	1505	2240	5050	5275	2251.25	1744.75	77.50
2	NIBL	1150	760	795	940	800	1260	1729	2450	1235.50	550.41	44.55
3	SCBNL	2144	1550	1640	1745	2345	3775	5900	6830	3241.13	1933.37	59.65
4	HBL	1500	1000	836	840	920	1100	1740	1980	1239.50	413.52	33.36
5	SBI	1500	401	255	307	335	612	1176	1511	762.13	509.44	66.85
6	EBL	750	430	445	680	870	1379	2430	3132	1264.50	934.68	73.92
7	BOK	850	254	198	295	430	850	1375	2350	825.25	687.88	83.35
8	NIC	399	245	220	218	366	496	950	1284	522.25	364.75	69.84

Source: Security Board, Nepal

The average MPS of SCBNL is higher than that of other selected commercial banks. Similarly, the S.D. of MPS of SCBNL varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The MPS of BOK is

highly inconsistent than other selected commercial banks. It means MPS of BOK varies significantly during sample year.

4.1.2 Analysis of EPS

The average EPS of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 96.48, 47.17, 147.39, 60.36, 17.91, 53.40, 31.55 and 14.81 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 29.71 and higher C.V. 60.95 and lower S.D. 9.03 and lower C.V. 11.31. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.2).

Table 4.2: The Earning per Share of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	005/006	006/007	007/008			
		057/058	058/059	059/060	060/061	061/062	062/063	063/064	064/065			
1	NABIL	59.26	55.25	84.66	92.61	105.49	129.21	137.08	108.31	96.48	29.71	30.80
2	NIBL	33.18	33.59	39.56	51.7	39.5	59.35	62.57	57.87	47.17	12.06	25.56
3	SCBNL	126.88	141.13	149.3	143.55	143.14	175.84	167.37	131.92	147.39	16.67	11.31
4	HBL	93.57	60.26	49.45	49.05	47.91	59.24	60.66	62.74	60.36	14.70	24.35
5	SBI	8.69	9.61	11.47	14.26	13.29	18.27	39.35	28.33	17.91	10.68	59.63
6	EBL	31.56	32.91	29.9	45.58	54.22	62.78	78.42	91.82	53.40	22.99	43.06
7	BOK	27.97	2	17.72	27.5	30.1	43.67	43.5	59.94	31.55	17.69	56.08
8	NIC	9.66	1.36	5.19	13.65	22.75	16.1	24.01	25.75	14.81	9.03	60.95

Source: Security Board, Nepal

The average EPS of SCBNL is higher than the other selected commercial banks. But, the S.D. of EPS of NABIL varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The EPS of NIC is highly inconsistent than other selected commercial banks. It means EPS of NIC varies significantly during sample year.

4.1.3 Analysis of DPS

The average DPS of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 62.50, 10.00, 103.75, 16.93, 3.20, 11.88, 10.01 and 1.58 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 22.99 and higher C.V. 217. and lower S.D. 3.43 and C.V. 17.04 .A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.3).

Table 4.3: The Dividend per Share of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	005/006	006/007	007/008			
		057/058	058/059	059/060	060/061	061/062	062/063	063/064	064/065			
1	NABIL	40	30	50	65	70	85	100	60	62.50	22.99	36.79
2	NIBL	0	0	20	15	12.5	20	5	7.5	10.00	8.13	81.28
3	SCBNL	100	100	110	110	120	130	80	80	103.75	17.68	17.04
4	HBL	27.5	25	1.32	0	11.58	30	15	25	16.93	11.80	69.75
5	SBI	0	0	8	0	0	5	12.59	0	3.20	4.86	152.08
6	EBL	0	0	20	20	0	25	10	20	11.88	10.67	89.85
7	BOK	0	10	5	10	15	18	20	2.11	10.01	7.33	73.21
8	NIC	0	0	0	0	10	0.53	1.05	1.05	1.58	3.43	217.51

Source: Security Board, Nepal

The average DPS of SCBNL is higher than the other selected commercial banks. But, the S.D. of DPS of NABIL varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The DPS of SBI is highly inconsistent than other selected commercial banks. It means DPS of SBI varies significantly during sample year.

4.1.4 Analysis of ROE

The average ROE of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 12.22, 13.59, 14.85, 19.24, 15.10, 15.36, 14.17 and 9.99 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 6.34 and higher C.V. 42.02 and lower S.D. 1.36 and lower C.V. 9.13. A Lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.4).

Table 4.4: The Return on Equity of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	005/006	006/007	007/008			
		057/058	058/059	059/060	060/061	061/062	062/063	063/064	064/065			
1	NABIL	17.28	15.38	12.60	11.30	8.03	9.67	10.62	12.92	12.22	3.02	24.68
2	NIBL	10.93	9.50	14.12	18.18	13.79	13.88	14.36	13.98	13.59	2.56	18.86
3	SCBNL	17.41	14.93	15.34	15.81	13.76	14.69	13.51	13.37	14.85	1.36	9.13
4	HBL	27.06	24.09	23.58	18.70	18.06	14.70	14.72	13.03	19.24	5.14	26.71
5	SBI	30.54	12.53	13.28	13.47	15.01	12.81	11.08	12.05	15.10	6.34	42.02
6	EBL	16.29	16.90	17.03	14.12	13.70	14.81	16.88	13.17	15.36	1.59	10.36
7	BOK	19.59	12.22	12.86	14.59	13.67	14.62	12.92	12.89	14.17	2.35	16.60
8	NIC	8.18	7.16	7.31	9.57	10.17	13.36	12.57	11.58	9.99	2.36	23.67

Source: Security Board, Nepal

The average ROE ratio of HBL is higher than the other selected commercial banks. But, the S.D. of ROE ratio of SBI varies greater from its mean value than other selected commercial banks. Similarly, coefficient variation shows same results. The ROE ratio of SBI is highly inconsistent than other selected commercial banks. It means ROE of SBI varies significantly during sample year.

4.1.5 Analysis of ROA

The average ROA of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 0.0234, 0.0142, 0.0243, 0.0130, 0.0086, 0.0141, 0.0161 and 0.0106 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 0.0102 and C.V. 63.5187 and lower S.D. 0.0015 and lower C.V. 5.2182. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.5).

Table 4.5: The Return on Assets of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	003/005	004/006	003/006			
		057/058	058/059	059/060	060/061	061/062	060/062	061/063	060/063			
1	NABIL	0.0159	0.0154	0.0251	0.0272	0.0303	0.0284	0.0247	0.0201	0.0234	0.0056	24.1429
2	NIBL	0.0110	0.0115	0.0130	0.0115	0.0143	0.0164	0.0182	0.0179	0.0142	0.0030	20.7676
3	SCBNL	0.0223	0.0260	0.0241	0.0227	0.0246	0.0256	0.0242	0.0246	0.0243	0.0013	5.2182
4	HBL	0.0144	0.0114	0.0091	0.0106	0.0111	0.0155	0.0147	0.0176	0.0130	0.0029	22.2987
5	SBI	0.0017	0.0058	0.0064	0.0072	0.0055	0.0090	0.0183	0.0144	0.0086	0.0053	62.4248
6	EBL	0.0134	0.0129	0.0117	0.0149	0.0143	0.0149	0.0138	0.0166	0.0141	0.0015	10.5550
7	BOK	0.0102	0.0015	0.0110	0.0134	0.0142	0.0165	0.0289	0.0328	0.0161	0.0102	63.5187
8	NIC	0.0114	0.0018	0.0064	0.0115	0.0151	0.0093	0.0136	0.0160	0.0106	0.0047	44.3807

Source: Security Board, Nepal

The average ROA ratio of SCBNL is higher than the other selected commercial banks. But, the S.D. of ROA of NABIL varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The ROA ratio of BOK is highly inconsistent than other selected commercial banks. It means ROA of BOK varies significantly during sample year.

4.1.6 Analysis to Total Debt to Total Assets Ratio

The average TDTA Ratio of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 0.9137, 0.9240, 0.9322, 0.9447, 0.9275, 0.9343, 0.9280 and 0.8947 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 0.0252 and higher C.V. 2.8172 and lower S.D. 0.0059 and C.V. 0.6359. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.6).

Table 4.6: The Total Debt to Total Assets Ratio of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	0.9421	0.9350	0.9207	0.9115	0.8754	0.8965	0.9058	0.9226	0.9137	0.0214	2.3454
2	NIBL	0.9085	0.8948	0.9292	0.9450	0.9275	0.9279	0.9303	0.9285	0.9240	0.0154	1.6620
3	SCBNL	0.9426	0.9330	0.9348	0.9367	0.9274	0.9319	0.9260	0.9252	0.9322	0.0059	0.6359
4	HBL	0.9630	0.9585	0.9576	0.9465	0.9446	0.9320	0.9321	0.9233	0.9447	0.0145	1.5382
5	SBI	0.9673	0.9202	0.9247	0.9258	0.9334	0.9219	0.9098	0.9170	0.9275	0.0175	1.8833
6	EBL	0.9386	0.9408	0.9413	0.9292	0.9270	0.9325	0.9408	0.9240	0.9343	0.0070	0.7448
7	BOK	0.9490	0.9182	0.9222	0.9315	0.9269	0.9316	0.9226	0.9224	0.9280	0.0097	1.0432
8	NIC	0.8778	0.8604	0.8633	0.8955	0.9017	0.9251	0.9204	0.9136	0.8947	0.0252	2.8172

Source: Security Board, Nepal

The average TDTA ratio of HBL is higher than the other selected commercial banks. But, the S.D. of TDTA ratio of NABIL varies greater from its mean value than other selected commercial banks. Similarly, coefficient variation shows same results. The TDTA ratio of NABIL is highly inconsistent than other selected commercial banks. It means TDTA ratio of NABIL varies significantly during sample year.

4.1.7 Analysis of Total Debt to Equity Ratio

The average TDER of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 11.2242, 12.5921, 13.8530, 18.2423, 14.0957, 14.3632, 13.1700 and 8.9887 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 6.3431 and higher C.V. 45.0003 and lower S.D. 1.3561and C.V. 9.7894. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa (see table 4.7)

Table 4.7: The Total Debt to Equity Ratio of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	16.28	14.38	11.60	10.30	7.03	8.67	9.62	11.92	11.2242	3.0173	26.8825
2	NIBL	9.93	8.50	13.12	17.18	12.79	12.88	13.36	12.98	12.5921	2.5639	20.3611
3	SCBNL	16.41	13.93	14.34	14.81	12.76	13.69	12.51	12.37	13.8530	1.3561	9.7894
4	HBL	26.06	23.09	22.58	17.70	17.06	13.70	13.72	12.03	18.2423	5.1390	28.1708
5	SBI	29.54	11.53	12.28	12.47	14.01	11.81	10.08	11.05	14.0957	6.3431	45.0003
6	EBL	15.29	15.90	16.03	13.12	12.70	13.81	15.88	12.17	14.3632	1.5912	11.0780
7	BOK	18.59	11.22	11.86	13.59	12.67	13.62	11.92	11.89	13.1700	2.3526	17.8634
8	NIC	7.18	6.16	6.31	8.57	9.17	12.36	11.57	10.58	8.9887	2.3643	26.3034

Source: Security Board, Nepal

The average TDER of HBL is higher than the other selected commercial banks. But, the S.D. of TDER of SBI varies greater from its mean value than other selected commercial banks. Similarly, coefficient variation shows same results. The TDER of SBI is highly inconsistent than other selected commercial banks. It means TDER of SBI varies significantly during sample year.

4.1.8 Analysis of P/E Ratio

The average P/E Ratio of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 21.83, 25.88, 21.99, 20.58, 50.00, 21.22, 35.48 and 52.02 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 50.69 and higher C.V. 108.32 and lower S.D. 6.03and lower C.V. 29.27. A Lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is vice versa.

Table 4.8: The P/E Ratio of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	25.31	12.67	8.74	10.80	14.27	17.34	36.84	48.70	21.83	14.21	65.09
2	NIBL	34.66	22.63	20.10	18.18	20.25	21.23	27.63	42.34	25.88	8.52	32.91
3	SCBNL	16.90	10.98	10.98	12.16	16.38	21.47	35.25	51.77	21.99	14.44	65.67
4	HBL	16.03	16.59	16.91	17.13	19.20	18.57	28.68	31.56	20.58	6.03	29.27
5	SBI	172.61	41.73	22.23	21.53	25.21	33.50	29.89	53.34	50.00	50.69	101.37
6	EBL	23.76	13.07	14.88	14.92	16.05	21.97	30.99	34.11	21.22	7.94	37.44
7	BOK	30.39	127.00	11.17	10.73	14.29	19.46	31.61	39.21	35.48	38.43	108.32
8	NIC	41.30	180.15	42.39	15.97	16.09	30.81	39.57	49.86	52.02	53.22	102.31

Source: Security Board, Nepal

The average P/E ratio of NIC is higher than the other selected commercial banks. Similarly, the S.D. of P/E ratio of NIC varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The P/E ratio of BOK is highly inconsistent than other selected commercial banks. It means BOK of BOK varies significantly during sample year.

4.1.9 Analysis of EPS to MPS Ratio

The average EPS to MPS Ratio of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 0.0626, 0.0418, 0.0599, 0.0516, 0.0304, 0.0528, 0.0503 and 0.0320 respectively during the period of 2000/01 to 2007/08. There is a higher S.D. 0.0327 and C.V. 63.2523 and lower S.D. 0.0111 and lower C.V. 22.8955. A Lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous whereas higher S.D. and C.V. is Vice – Versa (see table 4.9).

Table 4.9: The EPS to MPS Ratio of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	0.0395	0.0789	0.1144	0.0926	0.0701	0.0577	0.0271	0.0205	0.0626	0.0327	52.2478
2	NIBL	0.0289	0.0442	0.0498	0.0550	0.0494	0.0471	0.0362	0.0236	0.0418	0.0111	26.5177
3	SCBNL	0.0592	0.0911	0.0910	0.0823	0.0610	0.0466	0.0284	0.0193	0.0599	0.0274	45.8013
4	HBL	0.0624	0.0603	0.0592	0.0584	0.0521	0.0539	0.0349	0.0317	0.0516	0.0118	22.8955
5	SBI	0.0058	0.0240	0.0450	0.0464	0.0397	0.0299	0.0335	0.0187	0.0304	0.0139	45.7075
6	EBL	0.0421	0.0765	0.0672	0.0670	0.0623	0.0455	0.0323	0.0293	0.0528	0.0177	33.6190
7	BOK	0.0329	0.0079	0.0895	0.0932	0.0700	0.0514	0.0316	0.0255	0.0503	0.0312	62.1744
8	NIC	0.0242	0.0056	0.0236	0.0626	0.0622	0.0325	0.0253	0.0201	0.0320	0.0202	63.2523

Source: Security Board, Nepal

The average EPS to MPS ratio of NABIL is higher than the other selected commercial banks. Similarly, the S.D. of EPS to MPS ratio of NABIL varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The EPS to MPS ratio of NIC is highly inconsistent than other selected commercial banks. It means EPS to MPS ratio of NIC varies significantly during sample year.

4.1.10 Analysis of NWTA

The average NWTA of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC are 0.0863, 0.0760, 0.0678, 0.0553, 0.0725, 0.0657, 0.0720 and 0.1053 respectively during the period of

2000/01 to 2007/08. There is a higher S.D. 0.0252 and C.V. 26.2754 and lower S.D. 0.0059 and C.V. 8.7431 gives less variable, more consistent, more uniformity and more homogenous and vice versa(see table 4.10).

Table 4.10: The Net Worth to Total Assets of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	0.0579	0.0650	0.0793	0.0885	0.1246	0.1035	0.0942	0.0774	0.0863	0.0214	24.8339
2	NIBL	0.0915	0.1052	0.0708	0.0550	0.0725	0.0721	0.0697	0.0715	0.0760	0.0154	20.1950
3	SCBNL	0.0574	0.0670	0.0652	0.0633	0.0726	0.0681	0.0740	0.0748	0.0678	0.0059	8.7431
4	HBL	0.0370	0.0415	0.0424	0.0535	0.0554	0.0680	0.0679	0.0767	0.0553	0.0145	26.2754
5	SBI	0.0327	0.0798	0.0753	0.0742	0.0666	0.0781	0.0902	0.0830	0.0725	0.0175	24.0907
6	EBL	0.0614	0.0592	0.0587	0.0708	0.0730	0.0675	0.0592	0.0760	0.0657	0.0070	10.5888
7	BOK	0.0510	0.0818	0.0778	0.0685	0.0731	0.0684	0.0774	0.0776	0.0720	0.0097	13.4527
8	NIC	0.1222	0.1396	0.1367	0.1045	0.0983	0.0749	0.0796	0.0864	0.1053	0.0252	23.9459

Source: Security Board, Nepal

The average NWTA ratio of NIC is higher than the other selected commercial banks. Similarly, the S.D. of NWTA ratio of NIC varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The NWTA ratio of HBL is highly inconsistent than other selected commercial banks. It means NWTA of HBL varies significantly during sample year.

4.1.11Analysis of SODTA

The average SODTA of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK and NIC is 0.0207, 0.0183, 0.0034, 0.0190, 0.0378, 0.0142, 0.0303 and 0.0359 respectively during the period 2000/01 to 2007/08. There is a higher S.D. 0.0403 and higher C.V. 131.9636 and lower S.D. 0.0095 and lower C.V. 42.9046. A lower S.D. and lower C.V. means less variability, more consistent, more uniformity and more homogenous and vice versa for a higher one (see table 4.11).

Table 4.11: The Subordinate Debt to Total Assets of banks under the study is tabulated as follows:

S. N.	Name of Bank	Year								Mean	S.D.	C.V.
		000/001	001/002	002/003	003/004	004/005	004/006	004/007	004/008			
		057/058	058/059	059/060	060/061	061/062	061/063	061/064	061/065			
1	NABIL	0.0043	0.0056	0.0581	0.0137	0.0010	0.0078	0.0324	0.0431	0.0207	0.0212	102.1440
2	NIBL	0.0057	0.0081	0.0018	0.0273	0.0215	0.0258	0.0290	0.0270	0.0183	0.0112	61.0952
3	SCBNL	0.0025	0.0031	0.0030	0.0033	0.0013	0.0000	0.0140	0.0000	0.0034	0.0045	131.9636
4	HBL	0.0017	0.0184	0.0261	0.0266	0.0182	0.0171	0.0178	0.0261	0.0190	0.0082	42.9046
5	SBI	0.0004	0.0002	0.0005	0.0139	0.0454	0.0623	0.0730	0.1063	0.0378	0.0403	106.7566
6	EBL	0.0016	0.0231	0.0197	0.0000	0.0256	0.0188	0.0140	0.0110	0.0142	0.0095	66.6584
7	BOK	0.0004	0.0033	0.0000	0.0961	0.0006	0.0613	0.0638	0.0169	0.0303	0.0378	124.7147
8	NIC	0.0001	0.0016	0.0680	0.0117	0.0600	0.0633	0.0473	0.0351	0.0359	0.0281	78.3707

Source: Security Board, Nepal

The average SODTA ratio of SBI is higher than the other selected commercial banks. Similarly, the S.D. of SODTA ratio of SBI varies greater from its mean value than other selected commercial banks. But coefficient variation shows different results. The SODTA ratio of SCBNL is highly inconsistent than other selected commercial banks. It means SODTA of SCBNL varies significantly during sample year.

4.2. Examination of the Variables

The raw data in respect to all the 8 stocks covering the period ending of Mid-July 2001 to ending of Mid-July 2008 were then, transformed into possible yearly data of the specified variables (Stock price, Return, ROE, P/E Ratio, ROA, EPS to MPS Ratio, Subordinate Debt to Total Assets, Total Debt to Total Assets Ratio, Total Debt to Equity Ratio, DPS, NWTA) to conduct correlation analysis. There were 56 valid observations under the descriptive statistics. Descriptive Statistics shown in appendix 1. And, the test is done based on **Appendix 1**. However, the summary results in this respect are presented in **Table 4.12.**

Table 4.12: Pearson Correlation Matrix

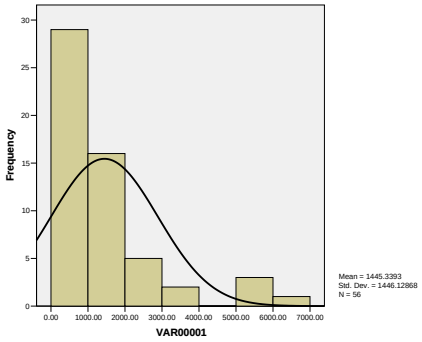
Variables	MPS	return (yearly)	ROE	ROA	P/E ratio	EPS to MPS ratio	TDTA Ratio	NWTA	SODTA	TDER	DPS
MPS	1										
return (yearly)	-.334(*)	1									
ROE	.552(**)	-.344(**)	1								
ROA	.571(**)	-.462(**)	.893(**)	1							
P/E ratio	0.068	0.203	-.415(**)	-.341(*)	1						
EPS to MPS Ratio	-.321(*)	0.146	.336(*)	0.256	-.664(**)	1					
TDTA Ratio	0.048	0.042	.360(**)	-0.024	-.455(**)	.264(*)	1				
NWTA Ratio	-0.048	-0.042	-.360(**)	0.024	.455(**)	-.265(*)	-1.000(**)	1			
SODTA Ratio	-0.143	-.376(**)	-0.132	-0.08	-0.023	-0.139	-0.078	0.078	1		
TDER	-0.034	0.162	.277(*)	-0.133	-.367(**)	0.262	.919(**)	-.919(**)	-0.099	1	
DPS	.593(**)	-0.162	.687(**)	.698(**)	-0.187	.292(*)	0.018	-0.018	-.335(*)	-0.032	1

Note: Number of Valid Observatios is 56.
* Correlation is significant at the 0.05 level (2-tailed test).
** Correlation is significant at the 0.01 level (2-tailed test).

As a shown in Table 4.12, there are eight variables including the two dependent variables, viz., stock price and stock return. The stock price is significantly correlated with factors, viz., DPS, ROA, ROE and EPS to MPS ratio whilst stock return is significantly correlated with factors, viz., ROA, SODTA and ROE at 10% alpha. The behaviors of the independent variables vary considerably. The variables like ROE and ROA are correlated significantly with both the stock price and return, where as the correlation of the stock price and stock return with the variable like SODTA and DPS are the odd. The DPS has a significant correlation with share price whilst it has low correlation with the stock return. Similarly, the SODTA has a significant correlation with the stock return whilst it has almost insignificant correlation with the share price. The strength of the correlation between depended and independent variables describes about the explanatory power of the independent variables. Therefore, the variables like ROE, ROA, EPS to MPS ratio and DPS explain the share price individually and collectively whilst ROE, ROA and SODTA ratio explain the stock return individually and collectively as well.

Looking at the strength of the correlation between independent variables, only two cells exhibit the significant strength among the independent variables, they are: in between ROA and ROE, P/E ratio and ROE, P/E ratio and ROA, EPS to MPS ratio and ROE, EPS to MPS ratio and P/E ratio, Total Debt to Total Assets ratio and ROE, Total Debt to Total Assets ratio and P/E ratio, Total Debt to Total Assets ratio and EPS to MPS, NWTA ratio and ROE,

NWTA ratio and P/E ratio, NWTA ratio and Total Debt to Total Assets ratio (perfect significant), Total Debt to Equity ratio and ROE, Total Debt to Equity ratio and P/E ratio, Total Debt to Equity ratio and Total Debt to Total Assets ratio, Total Debt to Equity ratio and NWTA ratio, DPS and ROE, DPS and ROA, DPS and EPS to MPS ratio, DPS and SODTA ratio. Such study reveals that there is a leverage effect. An employment of debt increases the earnings of the firm. The earnings and the dividends were correlated with most of other variables. They are the key information released by firms.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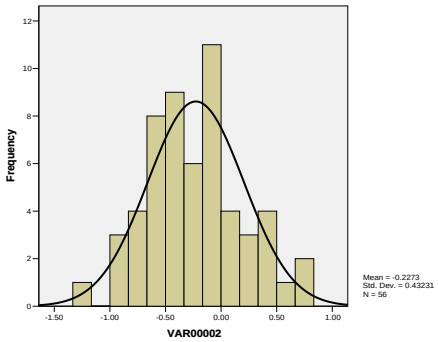
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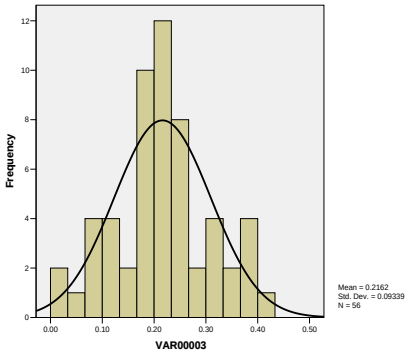
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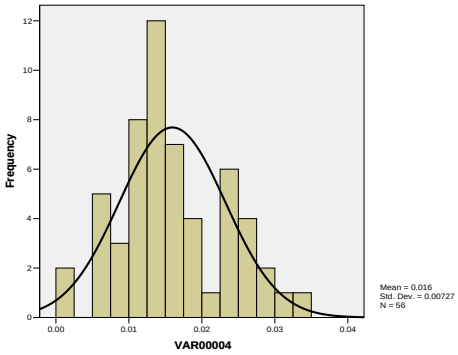
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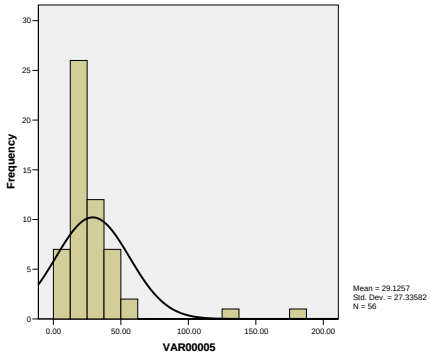
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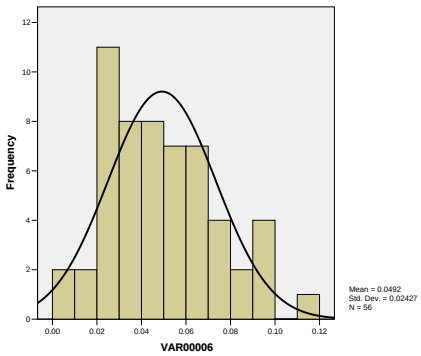
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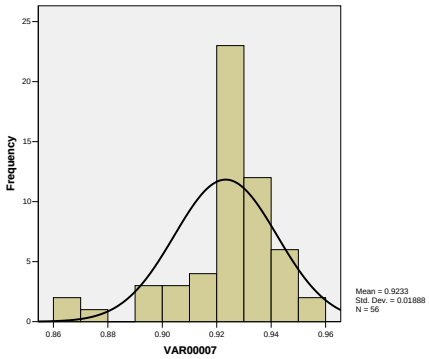
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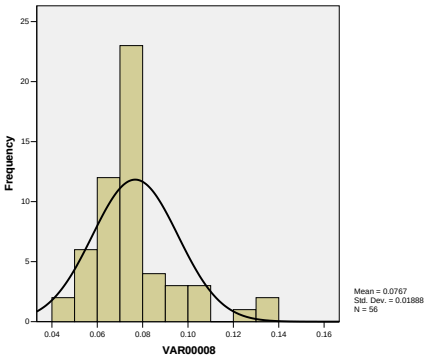
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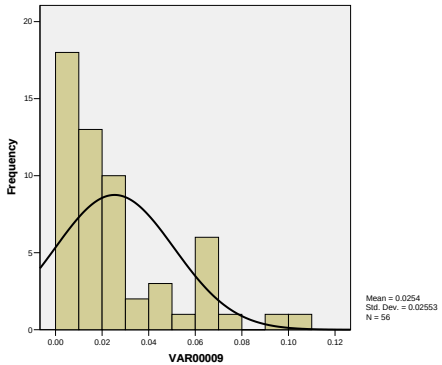
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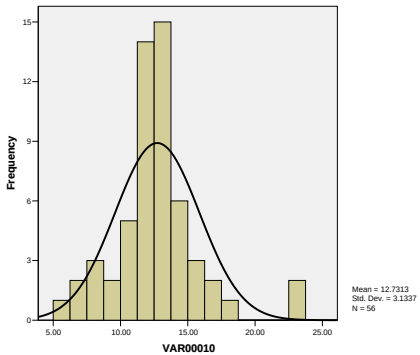
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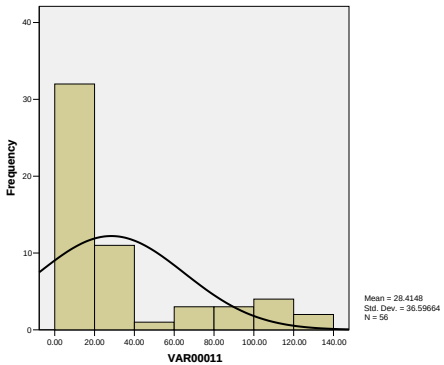
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N = 56

The histogram with normal distribution curve of each of the variable has been also drawn. The histogram reflects the frequencies of the observations whilst the normal distribution curve describes the nature of the frequency distribution. The peak of the normal curve represents the mean values. The layout of the normal curve describes about the concentration of the frequencies towards the mean value. A closer look to **Figure** revealed that the normal distribution curve for the most of the variables is skewed. The normal distribution curves for the variables, viz., stock return and ROE and Total Debt to Equity ratio look like symmetrically distributed (approximately), i.e., the observed values are approximately equally scattered around its mean value. The normal distribution curves for the variables, viz., MPS, ROA, P/E ratio, EPS to MPS ratio, NWTA,SODTA and DPS look like positively skewed, i.e., most of the observed values are distributed towards left. Whereas the normal distribution curves of variable, viz., Total Debt to Total Assets ratio is negatively skewed, i.e., most of the observed values are distributed towards right. A positively skewed distribution reveals that the mean value is concentrated towards lower values. Similarly, a negatively skewed distribution reveals that the mean value is concentrated towards higher values.

4.3. Share Price in relation to DPS, ROA, NWTA, SODTA

The raw data in respect to all the 8 stocks covering the period ending of Mid-July 2001 to ending of Mid-July 2008 were then, transformed into possible yearly data of the specified variables (DPS, ROA, NWTA ratio and SODTA ratio) to test under the econometric model (specified in methodology). While testing under the multiple regression models, pooled cross sectional data were used. The reason behind it was to estimate beta with one interval time of estimation covering as many as observations. Later the variables considered by the study were kept on to spread sheet of Microsoft Excel software and processed through the linear multiple regression with data analysis. The test under econometric model has conducted based on **Appendix 1**. However, the summary results in this respect are presented in **Table 4.13**

As a shown in **Table 4.13**, there are four models tested under the linear multiple regression analysis to explain the explicit relationship between the explanatory variables and the share price. Each models have own features and include different variables. The proportion of the total

variation of the stock price explained by the regression line has been found remarkable. There was greater evidence that the stock price largely is dependent upon the DPS, Return on Assets, Net Worth to Total Assets ratio and Subordinate Debt to Total Assets ratio.

Table 4.13 : Result of Multiple Regression Model of Share Price to DPS, ROA, NWTA,SODTA

Model	Intercept	Coefficients				R2	SEE	F-Ratio	Obser.
		DPS	ROA	NWTA	SODTA				
1	779.298 (199.460)	23.44 (4.329*)				0.352	1174.959	29.316*	56
2	-368.628 (389.364)		113665.287 (22239.733*)			0.326	1198.158	26.121*	56
3	1727.114 (822.313)			-3673.073 (10414.133)		0.002	1457.779	0.124*	56
4	1651.018 (273.237)				-8111.620 (7627.316)	0.021	1444.409	1.131*	56

Source: Appendix-1

Notes: 1) The Equation is used: $MPS_{it} = b_{0it}+b_{1it}DPS_{it}+b_{2it}ROA_{it}+b_{3it}NWTA_{it}+b_{4it}SODTA_{it}+U_{Eit}$. Where, DPS, ROA, NWTA and SODTA represent the dividend per share, return of assets, net worth to total assets and subordinate debt to total assets respectively and MPS Represents the market price per share.

*2) * Coefficients were found statistically significant at 1% alpha and **were found statistically significant at 5% alpha.*

3) Figures in parentheses are the Standard Error of the Coefficient.

The **Model 1** enters the variables DPS as key determinants of share prices. The results generated by the model 1 have been found encouraging. The regression model's R^2 indicates the model explains 35.2% of the variation in the stock price. This means that 64.8% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (DPS) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 1174.959(standard error of estimation). The result of regression coefficient revealed that a unit change in DPS would cause 23.44 unit changes in share price. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated DPS coefficient varying somewhere between estimated coefficient plus and minus one times 4.329(standard error of the coefficient).

The **Model 2** enters the variables ROA as key determinants of share prices. The results generated by the model 2 have been found encouraging. The regression model's R^2 indicates the model explains 32.6% of the variation in the stock price. This means that 67.4% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (ROA) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 1198.158(standard error of estimation). The result of regression coefficient revealed that a unit change in ROA would cause 113665.287 unit changes in share price. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated ROA coefficient varying somewhere between estimated coefficient plus and minus one times 22239.733(standard error of the coefficient).

The **Model 3** enters the variables NWTAs ratio as key determinants of share prices. The results generated by the model 3 have been found not encouraging. The regression model's R^2 indicates the model explains 0.2% of the variation in the stock price. This means that 99.8% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (NWTA) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 1457.779(standard error of estimation). The results of regression coefficient revealed that a unit change in NWTA would cause 3673.073 unit changes in share price. It is also found that the correlation of share price exists negative with NWTA ratio. The coefficients of the explanatory variables are statistically significant from zero and not satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of all variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated NWTA coefficient varying somewhere between estimated coefficient plus and minus one times 10414.133(standard error of the coefficient).

The **Model 4** enters the variables SODTA ratio as key determinants of share prices. The results generated by the model 4 also have not been found encouraging as earlier models. The regression model's R^2 indicates the model explains only 2.1% of the variation in the stock price, which is quite similar to the earlier model 3. This means that 97.9% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (SODTA ratio) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 1444.409(standard error of estimation). The results of regression coefficient revealed that a unit change in SODTA ratio would cause 8111.620 unit changes in share price. It is also found that the correlation of share price exists negative with SODTA ratio. The coefficients of the explanatory variables are statistically significant from zero and not satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated SODTA ratio coefficient varying somewhere between estimated coefficient plus and minus one times 7627.316(standard error of the coefficient).

4.4. Stock Return in relation to ROA, SODTA

The raw data in respect to all the 8 stocks covering the period ending of Mid-July 2001 to ending of Mid-July 2008 were then, transformed into possible yearly data of the specified variables (ROA and SODTA ratio) to test under the econometric model (specified in methodology). While testing under the multiple regression models, pooled cross sectional data were used. The reason behind it was to estimate beta with one interval time of estimation covering as many as observations. Later the variables considered by the study were kept on to spread sheet of Microsoft Excel software and processed through the linear multiple regression with data analysis. The test under econometric model has conducted based on **Appendix 1**. However, the summary results in this respect are presented in **Table 4.14.**

Table 4.14 : Result of Multiple Regression Model of Stock Return to ROA, SODTA

	Intercept	Coefficients		R2	SEE	F-Ratio	Obser.
		ROA	SODTA				
1	0.211 (.126)	-27.465 (7.183*)		0.213	0.38703	14.621	56
2	-0.066 (0.077)		-6.356 (2.135*)	0.141	0.404	8.859	56

Source: Appendix-1

Notes: 1) The Equation is used: $r_{it} = b_{0it}+b_{1it}ROA_{it}+b_{2it}SODTA_{it}++U_{Eit}$*.. Where,, DPS and SODTA represent the dividend per share and subordinate debt to total assets respectively and r represents the stock return.*

*2) * Coefficients were found statistically significant at 1% alpha and ** were found statistically significant at 5% alpha.*

3) Figures in parentheses are the Standard Error of the Coefficient

As a shown in **Table 4.14**, there are two models tested under the linear multiple regression analysis to explain the explicit relationship between the explanatory variables and the return. Each models have own features and include different variables. The proportion of the total variation of the stock return explained by the regression line has been found outstanding. There was greater evidence that the stock return largely is dependent upon the ROA and SODTA ratio.

The **Model 1** enters the variables ROA as key determinants of return (relative change in stock price). The results generated by the model 1 have been found encouraging. The regression model's R^2 indicates the model explains only 21.3% of the variation in the return. This means that 78.7% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (return) and explanatory variables (ROA) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times .38703(standard error of estimation). The result of regression coefficient revealed that a unit change in ROA would cause 27.465 unit changes in return. It also found that the correlation between ROA and return exist negative. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of coefficient to its standard error exceeds the critical t-test value of variable. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated

ROA coefficient varying somewhere between estimated coefficient plus and minus one times 7.183 (standard error of the coefficient).

The **Model 2** enters the variables SODTA ratio as key determinants of return. The results generated by the model 2 also have not been found encouraging. The regression model's R^2 indicates the model explains only 14.1% of the variation in the return, which is less than the model 1. This means that 85.9% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (return) and explanatory variables (SODTA) is remained down to zero and there is a 68% chance that the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times .404(standard error of estimation). The result of regression coefficient revealed that a unit change in SODTA would cause 6.356 unit changes in return. It is also found that the correlation between SODTA coefficient and return exist negative. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of SODTA ratio coefficient to its standard error exceeds the critical t-test value of variable. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated SODTA ratio coefficient varying somewhere between estimated coefficient plus and minus one times 2.135(standard error of the coefficient).

4.5. Share Price in relation to Two or More Variable at a Time

The raw data in respect to all the 8 stocks covering the period ending of Mid-July 2001 to ending of Mid-July 2008 were then, transformed into possible yearly data of the specified variables (ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio) to test under the econometric model (specified in methodology). While testing under the multiple regression models, pooled cross sectional data were used. The reason behind it was to estimate beta with one interval time of estimation covering as many as observations. Later the variables considered by the study were kept on to spread sheet of Microsoft Excel software and processed through the linear multiple regression with data analysis. The test under econometric model has conducted based on **Appendix 1**. However, the summary results in this respect are presented in **Table 4.15.**

As a shown in **Table 4.15**, there are four models tested under the linear multiple regression analysis to explain the explicit relationship between the explanatory variables and the share price. Each models have own features and include different variables. The proportion of the total variation of the stock price explained by the regression line has been found remarkable. There was greater evidence that the stock price largely is dependent upon the ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio.

Table 4.15: Result of Multiple Regression Model Determining Share Price

Model	Intercept	Coefficients					R2	SEE	F-Ratio	Obs.
		ROA	EPS to MPS	SODTA	DPS	NWTA				
1	1005.572 (407.418)	137857.380 (18402.163*)	-31092.563 (5545.401*)	-9102.133 (5108.469)			0.586	956.991	24.531	56
2	690.961 (374.624)	139357.041 (18756.261*)	-29875.202 (5614.919*)				0.561	976.427	33.821	56
3	998.667 (681.952)				23.413 (4.366*)	-2849.704 (8464.879)	0.353	1184.726	14.474	56

Source: Appendix-1

Notes: 1) The Equation is used: $MPS_{it} = b_{0it}+b_{1i}ROA_{it}+b_{2it}EPS\ to\ MPS_{it}+b_{3it}SODTA_{it}+b_{4it}DPS_{it}+b_{5it}NWTA_{it}+U_{Eit}$. Where, ROA,EPS to MPS,SODTA,DPS and NWTA represent the, return of assets, earning per share to market per share, subordinate debt to total assets, dividend per share and net worth to total assets respectively and MPS Represents the market price per share.

*2) * Coefficients were found statistically significant at 1% alpha and*
***were found statistically significant at 5% alpha.*

3) Figures in parentheses are the Standard Error of the Coefficient.

The **Model 1** enters the variables ROA, EPS to MPS ratio and SODTA ratio as key determinants of share prices. The results generated by the model 1 have been found encouraging. The regression model's R^2 indicates the model explains 58.6% of the variation in the stock price. This means that 41.4% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 956.991(standard error of estimation). The results of regression coefficient revealed that a unit change in ROA would cause 137857.380 unit changes in share price, a unit change in EPS to MPS ratio would cause 31092.563 unit changes in share price, and a unit change in SODTA ratio would cause 9102.133 unit changes in share price. It is also found that the correlation of share price exists negative with EPS to MPS ratio and SODTA ratio. The coefficients of the explanatory variables are statistically significant from zero and

satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of all variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated ROA coefficient varying somewhere between estimated coefficient plus and minus one times 18402.163 (standard error of the coefficient), and the EPS to MPS ratio coefficient varying somewhere between estimated coefficient plus and minus one times 5545.401(standard error of the coefficient). Similarly, There is also 68% chance that and the SODTA ratio coefficient varying somewhere between estimated coefficient plus and minus one times 5108.469(standard error of the coefficient). The relatively high explanatory shows down in the standard error of the coefficients. This means that the size of any predicted stock price value from the model can vary quite widely even if a firm's ROA, EPS to MPS ratio and SODTA ratio are fixed.

The **Model 2** enters the variables ROA and EPS to MPS ratio as key determinants of share prices. The results generated by the model 2 also have been found encouraging. The regression model's R^2 indicates the model explains 56.1% of the variation in the stock price. This means that 43.9% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (ROA and EPS to MPS ratio) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 976.427(standard error of estimation). The result of regression coefficient revealed that a unit change in ROA would cause 139357.041 unit changes in share price and a unit change in EPS to MPS ratio would cause 29875.202 unit changes in share price. It is also found that the correlation between EPS to MPS ratio and share price exist negative. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of all variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated ROA coefficient varying somewhere between estimated coefficient plus and minus one times 18756.261(standard error of the coefficient) and the EPS to MPS ratio coefficient varying somewhere between estimated coefficient plus and minus one times 5614.919(standard error of the coefficient). The relatively high explanatory shows down in the standard error of the coefficients. This means that

the size of any predicted stock price value from the model can vary quite widely even if a firm's ROA and EPS to MPS ratio are fixed.

The **Model 3** enters the variables DPS, NWTA ratio as key determinants of share prices. The results generated by the model 3 also have been found encouraging. The regression model's R^2 indicates the model explains 35.3% of the variation in the stock price. This means that 64.7% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (share price) and explanatory variables (DPS and NWTA ratio) is remained down to zero and there is a 68% chance the estimated value for dependent variable from the model varying somewhere between estimated value plus and minus one times 1184.726(standard error of estimation). The results of regression coefficient revealed that a unit change in DPS would cause 23.413 unit changes in share price, a unit change in NWTA ratio would cause 2849.704 unit change in share price. It is also found that the correlation of share price exists negative with NWTA ratio. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of each coefficient to its standard error exceeds the critical t-test value of all variables. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated DPS coefficient varying somewhere between estimated coefficient plus and minus one times 4.366(standard error of the coefficient), and the NWTA ratio coefficient varying somewhere between estimated coefficient plus and minus one times 8464.879(standard error of the coefficient). The relatively high explanatory shows down in the standard error of the coefficients. This means that the size of any predicted stock price value from the model can vary quite widely even if a firm's DPS, NWTA ratio are fixed.

A close look at **Table 4.15**, analyzing the pooled cross-sectional data, it is found that the effect of explained variables (ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio) in determining the stock price remained quite impressive. They all together explain around 73% of the variation in the share price. The ANOVA tests-significance column is also exhibited the same facts. The probability of R becoming less than zero is quite low and justified the criteria 1 % alpha. The regression coefficients also reveal the same facts and not satisfy the criteria 1% alpha. The stock price fluctuates by more than a unit of ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio over the period.

4.6. Stock Return in relation to Two or More Variable at a Time

The raw data in respect to all the 8 stocks covering the period ending of Mid-July 2001 to ending of Mid-July 2008 were then, transformed into possible yearly data of the specified variables (ROA and SODTA ratio) to test under the econometric model (specified in methodology). While testing under the multiple regression models, pooled cross sectional data were used. The reason behind it was to estimate beta with one interval time of estimation covering as many as observations. Later the variables considered by the study were kept on to spread sheet of Microsoft Excel software and processed through the linear multiple regression with data analysis. The test under econometric model has conducted based on **Appendix 1**. However, the summary results in this respect are presented in **Table 4.16**.

As a shown in **Table 4.16**, there are one models tested under the linear multiple regression analysis to explain the explicit relationship between the explanatory variables and the return. Each models have own features and include different variables. The proportion of the total variation of the stock return explained by the regression line has been found outstanding. There was greater evidence that the stock return largely is dependent upon the ROA and SODTA ratio

Table 4.16: Result of Multiple Regression Model Determining Stock Return

Model	Intercept	Coefficients		R2	SEE	F-Ratio	Obser.
		ROA	SODTA				
1	0.421 (0.125)	-29.445 (6.433*)	-7.03 (1.831*)	0.384	0.34555	16.543	56

Source: Appendix-1

Notes: 1) The Equation is used: $r_{it} = b_{0it}+b_{1i}ROA_{it}+b_{2it}SODTA_{it}+U_{Eit}$. Where, ROA and SODTA represent the, return of assets and subordinate debt to total assets respectively and r represents the stock return.

*2) * Coefficients were found statistically significant at 1% alpha and*
***were found statistically significant at 5% alpha.*

3) Figures in parentheses are the Standard Error of the Coefficient.

The **Model 1** enters the variables ROA and SODTA ratio as key determinants of return (relative change in stock price). The results generated by the model 1 have been found encouraging. The regression model's R^2 indicates the model explains only 38.4% of the variation in the return. This means that 61.6% of the variation is not explained by the model. The significance of the correlation exist between dependent variable (return) and explanatory variables (ROA and SODTA ratio) is remained down to zero and there is a 68% chance the estimated value for

dependent variable from the model varying somewhere between estimated value plus and minus one times .34555(standard error of estimation). The result of regression coefficient revealed that a unit change in ROA would cause 29.445 unit changes in return and a unit change in SODTA ratio would cause7.03 unit change in return. The coefficients of the explanatory variables are statistically significant from zero and satisfy the 1% alpha, that is, the ratio of ROA coefficient to its standard error exceeds the critical t-test value of variable. Although the coefficients are statistically significant, the true coefficients lie within vary large boundaries around these estimates. There is a 68% chance that the estimated ROA coefficient varying somewhere between estimated coefficient plus and minus one times 6.433(standard error of the coefficient) and the SODTA ratio coefficient varying somewhere between estimated coefficient plus and minus one times 1.831(standard error of the coefficient). This means that the size of any predicted return from the model can vary quite widely even if a firm's ROA and SODTA ratio are fixed.

A close look at **Table 4.16**, analyzing the pooled cross-sectional data, it is found that the effect of explained variables (ROA and SODTA ratio) in determining the stock return remained little bit less impressive. They all together explain around 38% variability caused in stock return. However, the effect of ROA and SODTA ratio can't be neglected in determining the stock return. The ANOVA tests-significance column also supported the statement. Because there is quite low probability of R becoming less than zero. It meets the significance level criteria at 1 % alpha. There is no problem with the ROA and SODTA ratio; it always satisfies the 1% alpha.

To sum up, it is found that in Nepalese Stock Market based on the results of the above analysis, share prices are the matter of dividends and earnings and fluctuate often with the market return. Nevertheless, there are the other factors as well, which affect the stock price like as leverage, net worth to total assets ratio. These variables are simply categorized into the four basic heading: a) Performance of the company during the year in terms of net profits, dividends b) efficiency of the firm against the bankruptcy and financial distress in terms of total liability, c) the proper base for fighting and driving themselves to the long term in terms of net worth, and d) systematic risk inherited by the firm. However, the above-cited inference still needs closer examination with different methodologies to arrive at a definite conclusion.

4.7 Major Findings

The major findings of the empirical analysis are described in the following paragraphs:

ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio play a crucial role in determining the stock price whilst ROA and SODTA ratio play a crucial role in determining the stock return. The capital market absorbs the information contained in the announcement of financial and accounting statement by the firms and the information on market sensitiveness of the stock.

The best-fit estimated line for the absolute market price per shares (here after share price) is given by the ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio whilst for the relative change in stock price (here after stock return) is given by the ROA and SODTA ratio.

Cash dividend is a sole determinant of both stock price and stock return. An increased and constant fixed payment of cash dividend influences favourably on stock price and stock return. It sends positive message in the capital market and investors become more eager to pay higher price for the stock to include in their portfolios.

An increase in earnings (net profits) and relatively constant earnings influence favourably on stock return. It creates positive image on the competing firms in the capital market and contain information on firm's current performance and signals as a contestant firm in paying dividend. Therefore, investors are more sensitive with the firm's earnings rather than the cash dividend.

A use of borrowed fund is not able to raise the stock price of the firm. An increase in total debt and relatively constant total debt influences adversely on the stock price. It creates negative image on the competing firms in the capital market and contains information on higher costs of bankruptcy or financial distress. Therefore, investors are reluctant to buy and hold the stock having higher debt ratio/higher leverage firms. Similarly, a firm does not able to raise the stock price by employing the more and more debt in the total assets financing.

An increase in net worth and a relatively stable net worth influences the stock price negatively. The capital market absorbs the information regarding an increase in net worth as a signal of dividend cut and omission or possible financial distress or irrelevant to the firm's capital structure. Such perception by the investors may push the firm towards liquidation and failure.

However, it is urged that the market reaction appears to be a function only of earning and cash dividend related information in capital market.

The stock returns are primarily the cause of prevailed market situations and the generated premium on market portfolios in capital market. A higher market return and a relatively stable market return influence the stock return positively. It reflects favourable prospects of firm's activities among market participants.

Similarly, an increase in systematic risk influences the stock return adversely. It reflects that investors are reluctant to invest in stocks having high systematic risk.

CHAPTER: V

SUMMARY, CONCLUSIONS AND RECOMMENDATION

This chapter is fully devoted to the major findings of the study and consists of four sections. The section one describes the summary of major findings of the study whilst section two consists of conclusion. Similarly, a recommendation has been described in sections three.

The major objective of this study is to examine the essential factors explaining the stock price in the context of Nepalese capital market. Its specific objectives are: (1) to examine the relationship between stock price and dividend, return of assets, net worth to total assets ratio, and subordinate debt to total assets ratio (2) to analyze the relationship between stock return and return of assets, and subordinate debt to total assets ratio (3) to examine the relationship between stock price and return of assets, EPS to MPS ratio, subordinate debt to total assets ratio, dividend, and net worth to total assets ratio (4) to analyze the relationship between stock return and return of assets, and subordinate debt to total assets (4) to assess the relationship of stock return with market return; (5) to evaluate the impact of change in significant determinants of the stock price and return on the investors' expectations.

This study is perhaps the first study of its kind in Nepal. This study covers eight equity stock listed in Nepal Stock Exchange, viz., Nabil Bank Limited, Nepal Investment Bank Limited, Standard Chartered Bank Nepal Limited, Himalayan Bank Limited, Nepal SBI Bank Limited, Everest Bank Limited, Bank of Kathmandu Limited, Nepal Industrial & Commercial Bank Limited. These eight equity stocks were actively traded in Nepal Stock Exchange during Mid-July 2000/01 to Mid-July 2007/08.

For the purpose of the study, the necessary data on stock price and other related variables of eight companies were collected for the period 2000/01 to 2007/08. The financial statement

mainly the profit and loss account and balanced sheet and annual report published by Securities Board of Nepal provided the data required to complete this study.

This study used a variety of ratios to accomplish the objectives. It employed multiple regression analysis to estimate the functional relationship between stock price and return with its various determinants.

5.1. Summary

The major findings of the empirical analysis are described in the following paragraphs:

ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio play a crucial role in determining the stock price whilst ROA and SODTA ratio play a crucial role in determining the stock return. The capital market absorbs the information contained in the announcement of financial and accounting statement by the firms and the information on market sensitiveness of the stock.

The best-fit estimated line for the absolute market price per shares (here after share price) is given by the ROA, EPS to MPS ratio, SODTA ratio, DPS and NWTA ratio whilst for the relative change in stock price (here after stock return) is given by the ROA and SODTA ratio.

Cash dividend is a sole determinant of both stock price and stock return. An increased and constant fixed payment of cash dividend influences favourably on stock price and stock return. It sends positive message in the capital market and investors become more eager to pay higher price for the stock to include in their portfolios.

An increase in earnings (net profits) and relatively constant earnings influence favourably on stock return. It creates positive image on the competing firms in the capital market and contain information on firm's current performance and signals as a contestant firm in paying dividend. Therefore, investors are more sensitive with the firm's earnings rather than the cash dividend.

A use of borrowed fund is not able to raise the stock price of the firm. An increase in total debt and relatively constant total debt influences adversely on the stock price. It creates negative image on the competing firms in the capital market and contains information on higher costs of bankruptcy or financial distress. Therefore, investors are reluctant to buy and hold the stock

having higher debt ratio/higher leverage firms. Similarly, a firm does not able to raise the stock price by employing the more and more debt in the total assets financing.

An increase in net worth and a relatively stable net worth influences the stock price negatively. The capital market absorbs the information regarding an increase in net worth as a signal of dividend cut and omission or possible financial distress or irrelevant to the firm's capital structure. Such perception by the investors may push the firm towards liquidation and failure. However, it is urged that the market reaction appears to be a function only of earning and cash dividend related information in capital market.

The stock returns are primarily the cause of prevailed market situations and the generated premium on market portfolios in capital market. A higher market return and a relatively stable market return influence the stock return positively. It reflects favourable prospects of firm's activities among market participants.

Similarly, an increase in systematic risk influences the stock return adversely. It reflects that investors are reluctant to invest in stocks having high systematic risk.

5.2. Conclusion

From the above findings, it is generalized that the dividends and net profits/earnings are the key factor in generating the value of share. An increase in dividends and earnings or a relatively stable dividends and earnings enhance both the stock price and stock return. The other factors, viz., debt employment, net worth increase, p/e ratio and ROA still contradict and create confusing in enhancement of the theory. The factors contained the information as they release. The share prices more often fluctuate positively with the net profit earned by the company, cash dividend paid by the company and the prevailing market return. To a large extent, share prices of the firm in the context of Nepalese capital market depends: a) on variables related to the performance of the company during the year in terms of net profit earnings and cash dividend payments; b) on variables relating to the firm's bankruptcy and financial distress in terms of total liability; c) on proper base for fighting and driving the company to the long terms in terms of net worth; and d) on systematic risk inherited by firm.

5.3. Recommendations

Based on the results obtained through empirical analysis, the following recommendations are forwarded:

1) Since the effect of cash dividends on market price per share is significant, the firms wishing to maintain market price per share at higher level should pay higher cash dividends. If the firm pays less cash dividends, the market price per share will remain at a lower level.

2) The study revealed that there is no clear relationship between debt and stock price. There is no clear trend in increase in market price per share due to the increase in debt level. The effect of debt level on share price is therefore not clear. Hence, the firm should not increase debt level with an attempt to increase stock price. It may or may not increase stock price.

3) The study revealed that the effect of net worth to total assets ratio on market price per share is not clear. There is no clear trend in increase in market price per share due to increase in net worth to total assets ratio. Hence, an increase in net worth level may or may not increase stock price.

4) Since the effect of dividends on return is significant, the firms willing to maintain relative change in stock price at a higher level should pay higher dividends. If the firm pays less cash dividends, the relative change in market price per share will remain at a lower level.