CHAPTER – I
Introduction

1.01 Background of the study:

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Internal financing means the funds produced from a business operation as opposed to external financing such as the issuance of debt and equity. Almost every business can access some internal finance by streamlining operations and increasing efficiencies most business can release working capital.

The neoclassical theory of corporate investment is based on the assumption that the management seeks to maximize the present net worth of the company. An investment project should be under taken if and only it increases the value of the shares. The securities markets appraise the project, its expected contribution to the future earnings of the company and its risks. If the value of the project as appraised by investors exceeds the cost, then the company's share will appreciate to the benefits of existing stockholders. A theory of investment explains the rates of change in physical capital in order to achieve a desired stock. The business corporation bas been on landscape for about a hundred years and its existence is pretty hard to ignore (Tobin et al; 1977). If the corporation didn't save a substantial fraction of their net income, this problem might not raise. Corporation would finance increases in their net assets through the capital markets and pay out all net income as dividends ; thereby in fact preserving the motivational or physical distinction between saver and real assets purchaser which the theory assumes. Alternatively the organization could save the cost. Net Corporation saving currently averages about half of total personal saving and gross corporate saving is roughly twice the rates of personal savings in the united states. (Kub, 1963).

In the theory of capital structure internal financing is the source for a firm using its profit as a source of capital for new investment rather than a) distributing them to firm's owners or other investors, and b) obtaining capital elsewhere. It is to be contrasted with external financing which consists of new fund from outside of the firm brought in for investment.

Internal financing is generally thought to be less expensive for the firm than external financing because the firm does not have to incur transaction cost to obtain it, nor does it have to pay the taxes associated with paying dividends. Many economists debate whether the availability of internal financing is an important determinant of firm investment or not (Chaudhary, 2003). A related controversy whether the fact that internal financing is empirically correlated with investment implies firms are credit constrained and therefore depends on internal financing for investments.

Internal financing by reinvestment of cash flow enjoys an excellent image: it reduces risk for the creditor and results in capital gains rather than more heavily taxed dividends for the shareholders. For managers, it is a resource they can mobilize without having to go to third parties; as such, it reduces the company's risk and increases the value of their stock options. Financial standpoint allows the company to finance investments that bring in less than the rate of return required given their risk. The internal financing has no explicit cost, whereas its true cost, which is an opportunity cost, is quite real. Reinvesting cash flow makes possible organic growth at a rate equal to the rate of return on equity multiplied by the earnings retention ratio (1 minus the payout ratio). With the constant financial leverage the growth rate of book value and capital employed. Lastly, the rate of growth of earnings per share is equal to the marginal rate of return on book equity multiplied by the earnings.

The fact recalled that something like three-quarters of total fund sources in the manufacturing sector come from internal funds. Empirical observation of the real world, some of it quite intense and systematic has led to the view that corporate managers have a definite preference for internal funds (Hoover: 1954). It could be said that it act as if it preferred internal to external funds. The greater is gross profit, the greater will be the level of internally generated funds, (Lintner: 1956) and, the greater is the internal fund, the greater will be the rate of investment.

The discussion of hypotheses about the effects of profits and internal finance on investment has treated the productivity of capital. It is defended that the propensity to

invest is almost certainly not related for rupee to the availability of internal funds (Hoover: 1954). Some immature interpretations of the internal funds approach assert that excess internal funds are "hot money" that must wind up in physical assets irrespective of the productivity of capital (Lintner: 1956). While this could happen in some instances, there are no reasons to believe that such behavior is the norm, particularly since mergers, dividends; liquid asset accumulation and refinancing often provide valid and apparent alternatives for corporate management.

In fact, there is reason to believe that corporate income retention is motivated by expected favorable investment opportunities and, further, that the extent to which firms do in fact use external funds depends upon the rate of output growth and its profitability (Dobrovolsky: 1951, and Meyer and Kuh: 1957). The net retentions are dependent upon expected investment opportunities. Furthermore, when direct competition is operative, profitable investment opportunities will generate net profits. These profits will tend to be driven toward zero as capital accumulation absorbs the most profitable investments. Where the market forces operate imperfectly and there is reason to believe that such circumstances succeed in several important sectors of the economy heavy reliance upon internal funds clearly could lead to the misuse of resources through avoidance of the market place (Kuh: 1963).

Recent research on determinants of firm-level investment has stressed the importance of proxies for firms' internal finance as explanatory variables, holding constant firm opportunities or the cost of capital. Most such studies have been based on departures from neoclassical investment models with perfect capital markets in the direction of models based on asymmetric information in financial markets. These departures build on insights from theoretical models of financial contracting under asymmetric information (using adverse selection and/ or moral hazard examples), in which movements in internal funds predict movements in investment spending, holding constant investment opportunities (Jaffee and Russell: 1976, Leland and Pyle: 1977, Stiglitz and Weiss: 1981, Greenwald, Stiglitz, and Weiss: 1984, Myers and Majluf: 1984, and Bernanke and Gertler: 1990). Many studies using different specifications of the neoclassical model and

different data sets have forcefully rejected simple models based on the null hypothesis of perfect capital markets (Fazzari et al.: 1988, Bond and Meghir: 1994, Hoshi et ah: 1991, Whited: 1992, Gilchrist: 1991, Himmelberg: 1991, Reiss: 1990, and Hubbard: 1990). Moreover, a departure from the perfect-capital-markets benchmark model indicates a role for internal funds. In particular, empirical studies using firm-level panel data show greater failure of the perfect-capital-markets neoclassical investment model for firms selected to be a priori more likely to face capital-market frictions.

Most empirical models of company investment rely on the assumption of perfect capital markets. In a world without taxes, one implication of this assumption is that firms are indifferent to funding their investment programs from internal or external funds. However, there is a rapidly growing body of literature examining the possible existence of imperfections in capital markets and their effects on firm's financial and real decisions. A large number of literatures in corporate finance and macroeconomics documents the relationship between liquidity and investment (Fazzari et al.: 1988, and Hoshi et al.: 1991). Although a strong correlation between cash (whether measured as a flow, a stock, or both) and investment is a well-documented fact, the causal connection between the two has been harder to establish, since both investment and cash flow are driven by underlying shocks to profitability. Existing studies have attempted to control for the profitability of investment by including a measure of Tobin's q in the estimated equation, but since current profitability may well be a better measure of the future profitability of investment than stock market data, the estimated coefficients may be biased (Lamont: 1997). Since exogenous instruments for cash that are uncorrelated with the profitability of investment are difficult to find, researchers instead have focused on examining the differences in cash-investment correlations between groups of firms hypothesized to have different dependence on internal finance. Studies typically use panel data on firms to estimate:

$$\frac{I}{K} = a + bq + c + \frac{CASH}{K} + YEARDUMMY + FIRMDUMMY \ldots\ldots\ldots\ldots(1.1)$$

Where, I is investment, K is capital stock at the beginning of the period, q is Tobin's q, and CASH is a measure of cash flow or cash stock. To test the hypothesis that two groups of firms face different finance constraints, the coefficient c on cash is compared across different firms, with firms categorized according to dividend payout ratios (Fazzari et al.: 1988), bond rating (Whited: 1992), or membership in a Japanese Keiretsu (Hoshi et al.: 1991). Another test is to compare the coefficient c across different time periods with different macroeconomic-credit conditions (Gertler and Hubbard: 1988, and Kashyap et al.: 1994). However, looking at differences in cash-investment, correlations may still be a less than perfect test. It may be that innovations in cash have different implications for the profitability of investment in small and large firms (Gilchrist and Himmelberg: 1995). Alternatively, it may be that q is more poorly measured for small firms (Poterba: 1988).

Recent empirical research has directed investment, asking in particular whether firms with free access to capital markets have different investment behavior. Emphasis resulted in part from the theoretical predictions of a recent surge of work in the economics of imperfect information that has explored how violations of the Modigliani-Miller (1958) theorem ascribe a role for financial factors in the investment process. In addition, interest in the question has been spurred by the poor empirical performance of standard optimizing models of investment. (Poterba and Summers: 1983, and Summers: 1981).

One specific hypothesis showed at the centre of recent attempts to explore the connection between finance and investment. If a firm has difficulty obtaining outside finance, its investment should display excess sensitivity to the availability of internal funds (Fazzari and Athey: 1987, Hoshi et al.: 1990, and Fazzari et al.: 1988).

As discussed above, various studies conducted in developed and industrialized countries show the relationship of firm investment with the financial factors in one way or another. The issue relating to the relationship between the investment of Nepalese business enterprises and their financial variables may certainly be a subject of great interest. This study, therefore, attempts to examine and analyze the relationship between Nepalese

firms' investment and their financial status especially with respect to market-to-book value of equity and liquidity status.

1.02. Statement of the problem

A firm's financial status is irrelevant for real investment decisions in a world of perfect and complete capital markets, as has been demonstrated by Modigliani and Miller (1958). However, financial structure may be relevant to the investment decisions of companies facing uncertain prospects that operate in imperfect or incomplete capital markets where the cost of external capital exceeds that of internal funds. For example, Greenwald et al. (1984), Myers and Majluf (1984), and Myers (1984) provide a foundation for these market imperfections by appealing to asymmetric information problems in capital markets. Alternatively, Bernanke and Gertler (1989, 1990) and Gertler (1992) demonstrate that agency costs can also cause a premium on external finance that increases as borrower net worth decreases. The investment decisions of firms operating in such environments are sensitive to the availability of internal funds because they possess a cost advantage over external funds.

Fazzari et al. (1988) and a number of subsequent empirical studies provide strong support for the existence of the financing hierarchy, which is most prevalent among firms that have been identified as facing a high level of financial constraints (Hoshi et al: 1991, Oliner and Rudebusch: 1992, Whited: 1992, Schaller: 1993, and Gilchrist and Himmelberg: 1995). These studies categorize firms according to characteristics (such as dividend payout, size, age, group membership, or debt ratings) that are designed to measure the level of financial constraints faced by firms. The results suggest that investment decisions of firms that are more financially constrained are more sensitive to firm liquidity than those of less constrained firms.

Fazzari et al. (1988) was the first of many papers to consider higher investment-cash flow sensitivities as evidence of greater financing constraints. Given the magnitude and the importance of this literature, it is surprising that little attention has been given to the theoretical foundation of the investment-cash flow sensitivity criterion. While it is easy to

show that constrained firms should be sensitive to internal cash flow while unconstrained firms should not, it is not necessarily true that the magnitude of the sensitivity increases in the degree of financing constraints. This is the crucial question, given that investment is sensitive to cash flow for the vast majority of firms analyzed. It is easy to justify this sensitivity based on the fact that external funds are more costly than internal funds for all firms as long as some transaction costs are involved.

Even in one-period model, investment-cash flow sensitivities do not necessarily, increase with the degree of financing constraints. In a multi period model, precautionary savings motives make it even more difficult to assess the theoretical relationship between investment-cash flow sensitivities and the degree of financing constraints. For example, Gross (1995) built and simulated an inter-temporal investment model and found a nonmonotonic relationship between investment-cash flow sensitivities and the extent of financing constraints. The relationship between investment-cash flow sensitivities and degree of financing constraints can be further complicated by the presence of irrational overly risk-averse managers, who choose to rely primarily on internal cash flow to invest despite the availability of low cost funds.

Debate over this matter has been fueled by the recent work of Kaplan and Zingales (1997) who challenge the generality of the conclusions of internal finance. They classified firms according to their degree of financial constraints, based on quantitative and qualitative information obtained from company annual reports. They found that investment decisions of the least financially constrained firms were the most sensitive to the availability of cash flow. Their controversial results "capture general features of the relationship between corporate investment and cash flow" and did not specific to the sample or techniques utilized.

Different studies conducted abroad reveal the fact that investment decisions of firms are found to be sensitive to their liquidity. The applicability of this fact is yet to be seen in the context of Nepalese enterprises. Therefore, the study is directed to the examination of the relationship between Nepalese firms' investment and internal finance. Another focus

of the study is the comparison of investment-liquidity sensitivities across different groups of Nepalese business enterprises. To sum up, the study deals with the following issues:

) What is the relationship between internal finance and firms' investment?

) Is the internal financing considered to be a dominant source of financing for the firm?

) How sensitive is investment to cash flow of the firm?

) Does cash flow and market value to book value of equity contribute in predicting the investment in fixed assets?

1.03 Objective of the study:

Major purpose of this study is to analyze investment- liquidity sensitivities across different groups of Nepalese enterprises. In another word it is an attempt to find out the relationship of the investment in the fixed assets with the liquidity status as proxied by cash flow and investment opportunities as proxy by market value to book value of the equity. The main objectives of this study are as follows:

1   To examine the status of selected Nepalese enterprises in terms of cash flow, liquidity position, ratio of market value to book value of equity and ratio of dividend per share to earning per share,

2   To determine the relationship of investment decision in fixed assets with cash flow and market value to book value of equity across the Nepalese enterprises,

3   To estimate the effects of liquidity position on the investments decision in fixed assets, and

4   To suggest for future areas for research in investment decision.

1.04 Limitation of the study:

In the context of Nepal, data problem is acute. The financial statements of Nepalese enterprises published by them are readily available since they are treated as confidential. Although Securities Board of Nepal (SEBON) Ltd. and NEPSE publish financial statements of the listed companies to avail and ease information regarding listed enterprises. It is still unable to provide required data of all listed enterprises from the year of listing. There is no data base, which makes it difficult to carry out any research in Nepalese capital market.

In order to conduct the study on the relationship between internal finance and firm investment and to make it fruitful, it is essential that the data should be of frequent time intervals. Here again, monthly or quarterly data could not be obtained, and due to this problem, the study has been compelled to use the annual data which are available in balance sheets, profit and loss accounts and other financial statements. In the absence of monthly and quarterly data, many of the approaches to investment decision could also not be employed.

Most of the studies conducted in the area of investment decisions of firms' exclude banks, finance companies, and insurance companies. But this study includes these enterprises also because exclusion of such types of enterprises from sample significantly decreases the sample size to very few. The result of this study may therefore be a little different than previous studies.

This Study is based on the sample of Nepalese enterprises. Since the study covers only the period of five years, the investment behavior of enterprises during the long period of time could not be indicated exactly. As the data analysis is based on financial data obtained from financial reports collected from the SEBON. It possesses all the inherent limitations of financial data. The regression results are based on pooled cross-section and time series analysis of only limited observations.

1.05 Organization of the study:

This study has been organized into five main chapters, each devoted to some aspects of the study of the relationship between internal finance and firm investment of Nepalese business enterprises. The titles of each chapter are   as follows:

Chapter one contains introduction, general background, statement of the problem, objective of the study, limitation and organization of the study.

Chapter two includes review of the literatures collected from books, journals and unpublished thesis and independent research including from websites. It contains of empirical review, concluding remarks, theoretical frameworks and research gaps.

Chapter three contains which includes research design and data collection procedure tools for analysis (statistical tools and financial tools) method of analysis and presentation.

Chapter four presents empirical analysis with the test of factor affecting investment decision.

Chapter five presents the conclusion of the research with suggestions and recommendations.

CHAPTER- II
Review of Literature

Internal financing means the funds produced from a business operation as opposed to external financing such as the issuance of debt and equity. Almost every business can access some internal finance by streamlining operations and increasing efficiencies most business can release working capital.

In the theory of capital structure internal financing is the finance for a firm using its profit as a source of capital for new investment rather than a) distributing them to firm's owners or other investors and b) obtaining capital elsewhere. It is to be contrasted with external fiancing which consists of new money from outside of the firm brought in for investment. Internal financing is generally thought to be less expensive for the firm than external financing because the firm does not have to incur transaction cost to obtain it, nor does it have to pay the taxes associated with paying dividends. Many economists debate whether the availability of internal financing is an important determinats of firm investment or not. A related controversy whether the fact that internal financing is emperically corelated with investment implies firms are credit contrained and therefore depends on internal financing for investments.

Internal financing by reinvestment of cash flow enjoys an excellent image: it reduces risk for the creditor and results in capital gains rather than more heavily taxed dividends for the shareholder. For managers, it is a resource they can mobilize without having to go to third parties; as such, it reduces the company's risk and increases the value of their stock options. For the same reason, though, systematic reinvestment of cash flow can be dangerous. It is not appealing from a financial standpoint if it allows the company to finance investments that bring in less than the rate of return required given their risk. To do so is to destroy value. If the penalty for value destruction is delayed, as it often is because companies that reinvest excessively are cut off from the capital markets, the eventual sanction is all the harsher. The trap for the unwitting is that internal financing has no explicit cost, whereas its true cost, which is an opportunity cost, is quite real.

Reinvesting cash flow makes possible organic growth at a rate equal to the rate of return on equity multiplied by the earnings retention ratio (1 minus the payout ratio). With constant financial leverage and a constant rate of return on capital employed, the organic growth rate is the same as the growth rate of book equity and capital employed. Lastly, the rate of growth of earnings per share is equal to the marginal rate of return on book equity multiplied by the earnings

The company, if not able to manage their fund for the regular work they have to face difficulties in the smooth operation. The market value of the share would not be raised and dividend can't be paid to the investor as a result no one will be impressed for the investment on the share. Company should be aware to manage their internal fund for the investment in the fixed assets where they can increase their image in public. As well as the book value of the assets will be high for the future. An internal source of the companies is the return earning which the company can use whenever is needed.

The review of literature has been presented in the three sections. Section I presents an empirical review. The conclusion remarks on empirical study has been given in the section II and section III is devoted to theoretical framework. Section IV is concerned to research gap.

2.03 The concept and theoretical background:

(i) Internal finance: One of the sources of fund for firm is internal finance for capital. This is considered as managerial consideration rather than theoretic consideration. One of the best documented empirical facts in economic research has been the positive relationship between internal finance and cash flows - the sum of retained earnings, depreciation and capital expenditures as independence variables and investment as dependence variable. But thee is no concision on the analytical basis for the cash flow theory. There are two distinct approaches to the cash flow theory of investment: the managerial and information - theoretic approaches. The premise of the managerial approach is that managers are primarily interested in maximizing the growth rate of the firm. The premise of the information -theoretic approach is that   managers   try   to

maximize shareholder value. Using a panel of U.S. manufacturing firms (1972/90), Samuel (1999) addressed to distinguish between these two approaches on the basis of observed firms' characteristics. The results suggested that firms relied on internal finance for capital expenditures because of managerial considerations rather than information theoretic considerations. The principal shortcoming of the information - theoretic approach is its reliance on dividend practices as the decisive criterion for studying firm heterogeneity. But dividend practices did not succeed for distinguishing between managerial and information-theoretic approaches since both approaches predicted a negative relationship between dividend payout ratios and   capital expenditures. But one can distinguish between managerial and information - theoretic approaches using such variables as size, exchange listings, and the ratio of R&D to sales and make contrasting predictions about the firm's reliance on internal finance for capital expenditures.

The evidence showed that the firm's observed reliance of capital expenditures on internal finance was driven by managerial rather than information theoretic considerations. While no current research directly distinguishes between managerial and information - theoretic approaches with regard to developing countries, preliminary evidence seemed to favor the managerial approach. And even though the stock market might play a limited role as a source of finance, policy initiatives to reform the financial sector and develop capital markets could enhance the overall efficiency of the resource allocation process in the economy (Samuel, 1999).

Internal financing means the funds produced from a business operation as opposed to external financing such as the issuance of debt and equity. Almost every business can access some internal finance by streamlining operations and increasing efficiencies. Most business could release working capital through internal finance. The internal finance represented by the flow of internal fund, the stock of liquid assets, debt capacity, and accrued tax liability. A firm's financial status is irrelevant for real investment decision in a world of perfect and complete capital markets as demonstrated by Modigliani and Miller 1958. However financial structure might be relevant to the investment decision of companies facing uncertain prospects that operate in imperfect or incomplete capital

market that the cost of external fund exceeded than the internal funds (Greenwald et. al 1984). The most common technique for valuing risky cash flows was the Free Cash Flow (FCF) method. In that method, interest tax shields were excluded from the FCFs and the tax deductibility of interest treated as a decrease in the cost of capital using the after-tax weighted average cost of capital (WACC). Because the WACC affected by changes in capital structure, the FCF method poses several implementation problems in highly leveraged transactions, restructurings, project financings, and other instances in which capital structure changes over time. In these situations, the capital structure has to be estimated and those estimates used to compute the appropriate WA CC in each period. Under these circumstances, the FCF method could be used to correctly value the cash flows, but it was not straightforward (Fazzari et. al; 1988). These studies divided a sample of firms according to an a priori measure of financing constraints and compare the investment-cash flow sensitivities of the different sub-samples. The studies interpreted greater investment-cash flow sensitivity for firms considered more likely to face a larger wedge between the internal and the external cost. This methodology widely applied to identify firms that are more affected by financing constraints and institutions that likely to alleviate those constraints (Hoshi, Kashyap, and Scharfstein, 1991). They concluded that a group affiliation alleviated underinvestment problems caused by capital market imperfections. Despite the size and policy-importance of that literature, the fundamental assumptions underlying it remained largely unexplored. While subsequent work replicated the findings of FHP, 1988 by using different a priori criteria. In particular, there was no test of the fundamental assumption-implicit in all these tests that investment-cash flow sensitivities increase monotonically with the degree of financing constraints. This was particularly surprising because there was no strong theoretical reason to expect a monotonic relationship. It investigated the relation between investment- cash flow sensitivities and financing constraints by undertaking an in-depth analysis of a sample of firms exhibiting an unusually high sensitivity of investment to cash flow.

The "cost of capital" used to acquire assets whose yields are uncertain; and in which capital could be obtained by many different media. There are corporation finance

specialist concerned with the techniques to ensure their survival and growth, the managerial economist concerned with capital budgeting, and economic theorist concerned with explaining investment behavior at the micro and macro levels. It analyzed the economic theorist at least tended to side-step the essence of cost-of-capital problem by proceeding as though physical assets-like bonds (Franco et,al; 1958)

(ii)Firm investment: Investment is the economic activity of committing a set of resource with the expectation of receiving a stream of benefit in the future. In current managerial practice, if the time horizon over which benefits accrue is longer than one year then the resources used are called investment. This is also known as capital expenditure. If the time horizon is shorter than one year, then the amount spent is considered as a revenue expense (Mote el. al: 1977). Investment decision involves the decision of allocation of capital or commitment of funds to long term assets that would yield benefit in the future. Two important aspects of investment decision are: (a) the evaluation of the prospective probability of new investment, and (b) the measurement of a cut-off rate against that the prospective returned of new investment could be compared. Future investment result is difficulty to measure because of the uncertain future, investment decisions involves risk investment decision is also involves decision of recommitting fund when an assets becomes less productive or non profitable (Pandey, 1999) .It is defined as the firm level fixed investment which stressed the importance of proxies for the firms' internal finance as explanatory variables. An estimation strategy based on the Euler equation representation of firms' investment decisions. It is reflected reservations with standard investment models based on the Torbin's q theory. In particular, a well known problem in measuring marginal q, as well as stock market valuations may not accord with the predictions of the efficient markets hypothesis (Hubbard et. al; 1995). It is shown a literature initiated by Tobin (1969) relates investment to q. The q investment is the ratio of the market's valuation of capital to the cost of acquiring new capital. An increased in the prospective return on capital or a decreased in the market's discount rate raises q and thereby increases investment. An adjustment cost for changing the capital stock and the optimal amount of current

investment depends only on the current value of q. But generally, time-to-build technology for the capital stock-current investment depends on current and lagged values of q (Hayashi,1982 and Abel and Blanchard,1986). The growth rate of investment relates to current and lagged values of proportionate changes in q. An important source of variation in the numerator of q-the market value of capital is the change in stock market prices. Therefore, q theory could rationalize a positive relation between investment and current and lagged changes in stock market prices, (Fama 1981, Barro 1989 and Hayashi 1982).The distinction between average and marginal q could cause difficulty in empirical implementations of the theory. For example, changes in relative prices for energy relative to other goods might move the stock market in one direction. The marginal q investment in the new capital might rise, while average q (associated with the existing capital) falls. Tax changes, especially when treated old and new capital differently, could similar effects. If the data referred to average q, as typically the case, the theory performed well if only the dominant disturbances related to changes in the prospective returns. The finding of many of the researchers (Furstenberg 1977, Clark 1979 and Summers 1981). The market value of capital limited explanatory power for investment. Furthermore, when measured of corporate profits or production or similar variables considered, the statistical significance of the market-valuation a variable tends to disappear. Of course, corporate profits and production are simultaneously determined with investment, and this simultaneity could account for the explanatory value of these variables. But the view in the empirical literature is that even predetermined values of variables like profits or production leave market-valuation measures with little predictive power for investment. This conclusion appears to conflict with the strong relations between investment [and other macroeconomic variables, such as gross national product (GNP)] and stock market returns, as reported in Fama (1981) and Barro (1989). The explanation is that the stock market does better than the measures of q that have been used in empirical studies of investment. The investment variable consists of expenditures on capital goods and is therefore gross of depreciation. In some models (in which adjustment costs pertain to gross expenditures rather than to net investment), it is gross investment that relates naturally to q-type variables. However, in other settings (in which replacement expenditures do not entail any adjustment cost), it is net investment that would be

associated with q. In any event, since available measures of depreciation are largely arbitrary, the choice of gross investment tends to be dictated on grounds of data availability. It is believed that the evidence for firm- level investment indicates the significance of capital –market imperfections in affecting investment decisions. At least two directions for future research appear promising. The first is to trace the evolution of firms 'terms of trade in capital markets in a model in which firm switch among financing regimes (Pakes, 1994). The second is to examine case studies of firms in particular industries for which capital- market frictions appears most relevant (Reiss, 1990).

An increase in the prospective return on capital or a decrease in the market's discount rate raises q and thereby increases investment. With a simple form of adjustment cost for changing the capital stock, the optimal amount of current investment depends only on the current value of q. But generally, with a time-to-build technology for the capital stock-current investment depends on current and lagged values of q (Hayashi1982, and Abel and Blanchard 1986). The growth rate of investment is related to current and lagged values of proportionate changed in q. An important source of variation in the numerator of q, the market value of capital changed in stock market prices. Therefore, q theory could rationalize a positive relation between investment and current and lagged changes in stock market prices. When measured of corporate profits or production or similar variables considered, the statistical significance of the market-valuation variables tends disappeared. Corporate profits and production simultaneously determined with investment, and this simultaneity could account for the explanatory value of these variables (Fama 1981 and Barro 1989).

(iii) Fixed investment: In economics fixed investment refers to investment in fixed capital, i.e. tangible capital goods (real means of production or residential buildings), or to the replacement of depreciated capital goods.Thus, fixed investment is investment in physical assets such as machinery, land, buildings, installations, vehicles, or technology. Normally, a company balance sheet will state both the amount of expenditure on fixed assets during the quarter or year, and the total value of the stock of fixed assets owned.The use of the term "fixed" refers not so much to the asset being invested in

"staying in one place", but to the circulation of flows of capital. Normally, for the purpose of accounting, fixed investment refers to physical assets held for one year or more. The investment capital is therefore fixed, in the sense that it is tied up in physical assets for a longer time, and thus cannot be used for other purposes. This contrasts with, for example, investment capital in the form of liquid bank deposits earning interest.The amount of fixed investment may be stated "gross" (before taking into account depreciation) or "net" (after depreciation). By subtracting disposals of fixed assets from additions to fixed assets in an accounting period, they obtain a measure of the net (fixed) capital formation.

In official statistics, attempts are often made to estimate the value of fixed capital assets in a nation, the value of their depreciation (or consumption of fixed capital) and the value of gross fixed capital formation by sector and type of asset. Fixed assets depreciate in value over time, due to wear and tear and market obsolescence. At the end of their useful lifetime and possess only a scrap-value.For statistical purposes, investment in fixed capital must be distinguished from investment in intermediate goods.

The broad historical trends are: (Wikipedia 2007)

) Fixed assets are replaced in a shorter and shorter time. Thus, for example, a type of machinery which in the 19th century might have a useful lifetime .

) Many fixed assets have become cheaper to acquire, due to more efficient production methods. Thus, the same amount of capital can nowadays often buy a larger stock of fixed assets.

) The average turnover time of fixed capital (the time it takes for its value to be recovered from sales) is decreasing. In part, this is due to the ability of businesses to write off their fixed assets for tax purposes at a quicker rate (the true depreciation rate and the legally permitted depreciation rate often diverge).

) Fixed investments nowadays can be enormously large (for example, a nuclear power plant might be built for three billion dollars). This creates more risk and

means that many financial guarantees and insurance arrangements become necessary. Likewise, investing decision making in these cases becomes highly sophisticated, involving such techniques as game theory, decision theory, financial modeling, etc.

∫ In the last two decades, the total amount of annual fixed investment in. (OECD) countries has tended to stagnate or grow more slowly in real terms the main growth areas have been investment in computers and the construction of buildings. Thus, an increasing portion of total capital is tied up not in physical capital goods, but in financial obligations. This trend is closely related to perceptions of investment risk and relative profitability, in a situation of sluggish growth in ordinary consumer demand. Globally, that means the growth in physical wealth is increasing at a slower rate, though nations with a superior trading position can of course amass more physical wealth, through importing.

∫ The value of the housing stock and real estate generally has tended to grow much faster since the mid-1980s, suggesting to many commentators that it is "over-valued". The most likely reason is cheap credit making the acquisition of real estate easier, and thus strongly stimulating market demand for properties.

∫ In the developed capitalist countries, the total stock of fixed capital tied up in residential buildings is nowadays larger than the total stock of fixed capital tied up in industries.

It refers to a depreciation charge (or "write-off") against the gross income of a producing enterprise, which reflects the decline in value of fixed capital being operated with. Fixed assets will decline in value after They are purchased for use in production, due to wear and tear, changed market valuation and possibly market obsolescence. Thus, ree cash flow(FCF) represents a compensation for the loss of value of fixed assets to an enterprise.

Same as unit investment trust, investment companies which purchased a fixed, unmanaged portfolio of income producing securities and sold shares in the trust to

investors. The major difference between a Unit investment Trust and a mutual fund is that a mutual fund is actively managed, while a unit investment trust is not managed at all. Capital gains, interest and dividend payments from the trust are passed on to shareholders at regular periods. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. A unit investment trust is generally considered a low-risk, low-return investment. One downside of a unit investment trust is that given the fixed nature of its portfolio, the trust is susceptible to inflation. Also called unit investment trust or participating trust or fixed investment trust. (Jorge A; 1998)

Recent developments in the theory of investment under uncertainty have emphasized the importance of the timing of the decision to invest and the value of waiting, as long as the existence of sunk costs that cannot be recouped if it is subsequently decided to reverse the investment. This theory could explain investment activity, overinvestment, and strategic interaction among investors. As international capital flows in general share a number of these features in so far as it does not always take place smoothly and continuously. The model involved two investors who borrow at the given world interest rate to invest in projects in the domestic economy, where the rate of return varies inversely with the amount invested. Investment involves a fixed cost, but there are assumed to be no subsequent costs of adjusting the capital stock. Uncertainty enters either as affecting the domestic rate of return or the foreign interest rate. The model characterized the interaction over time of the two investors and the optimal timing of their jointly dependent investment decisions. The optimal waiting time to invest increases as foreign borrowing becomes more expensive because higher returns are required to cover the fixed cost of investing. The lower the initial level of profitability relative to its future evolution, the more likely investment will follow a sequential pattern; conversely, a relatively high initial rate of return will be associated with simultaneous investment. The foreign interest rate is constant; there is no correlation between capital flows and the spread between this rate and the domestic rate of return. The surge in business fixed investment become key factor behind the unexpected strength of economic activity in the industrial countries

in 1988 (World Economic Outlook, 1989). It is examined the reasons for the strength of investment, evaluates its characteristics, and discussed its sustainability. Real business fixed investment in 1988 is estimated to have grown by over 5 percent a year in every Group of Seven country, and over 10 percent a year in Canada, the United States, Japan, and the United Kingdom. In no other year in the 1980s have the industrial countries experienced such a broadly based expansion in fixed investment (World Economic Outlook, 1989).

New tests for financing constraints on investment is often-neglected the role of working capital as both a use and a source of funds. The coefficient of endogenous working capital investment is negative in a fixed-investment regression, as expected if working capital competes with fixed investment for a limited pool of finance. This finding addressed a criticism of previous research on finance constraints, that cash flows may simply proxy shifts in investment demand. In addition, previous studies might have underestimated the impact of finance constraints on growth and investment because firms' smooth fixed investment in the short runs with working capital. (Steven M. et.al 1993)

(iv) Cash flow: The free cash flow theory of capital structure helps explain previously puzzling results on the effects of financial restructuring. Free cash flow is only one of approximately a dozen theories to explain takeovers all of which it believed of some relevance which sketched out some empirical predictions of the free cash flow theory, and the facts that lend it acceptance. The positive market response to debt creation in oil industry takeovers (Robert Bruner, 1985) is consistent with the notion that additional debt increases efficiency by forcing organizations with large cash flows but few high-return investment projects to disgorge cash to investors. The debt helped prevent such firms from wasting rest heiress on low-return projects. Free cash flow theory predicts which mergers and takeovers are more likely to destroy, rather than to create, value; it showed how takeovers were both evidence of the conflicts of interest between shareholders and managers, and a solution to the problem. Therefore, the theory implied managers of firms with unused borrowing power and large free cash flows were more likely to undertake low-benefit or even value-destroying mergers. Diversification programs generally fit that

category, and the theory predicted it will generate lower total gains. The major benefit of such transactions might be that it involved less waste of resources than if the funds had been internally invested in unprofitable projects. Acquisitions not made with stock involve payout of esthetics to (target) share- holders and this could create net benefits even if the merger generates operating inefficiencies. Such low-return mergers were more likely in industries with large cash flows whose economics dictated that exit occurs. In declining industries, mergers within the industry will create value, and mergers outside the industry were likely to be low or even negative-return projects. Free cash flow as the theory predicted that takeovers financed with cash and debt will generate larger benefits than those accomplished through exchange of stock. Stock acquisitions tend to be different from debt or cash acquisitions and more likely to be associated with growth opportunities and a shortage of free cash flow; but that was a topic for future consideration. The agency cost of free cash flow is consistent with a wide range of data for which there has been no consistent explanation. It found no data which was inconsistent with the theory, but it was rich in predictions which were yet to be tested.

A large finance and macroeconomics literature shows the relation between corporate investment and cash flow to test for the presence and importance of financing constraints. Beginning with "Financing Constraints and Corporate Investment"(Fazzari et al ,1988) , it divided sample of firms according to a priori measure of financing constraints and compared the investment-cash flow sensitivities of the different sub-samples. It interpreted greater investment-cash flow sensitivity for firms considered more likely to face larger wedge between the internal and the external cost of funds as evidence firms are indeed constrained.

A financing constraint is the relationship between investment-cash flow sensitivity and the degree of financing constraints. The most precise (but also broadest) definition classifies firms as financially constrained if they face a wedge between the internal and external costs of funds. By this definition, all firms are likely to be classified as constrained. A small transaction cost of raising external funds would be sufficient to put a firm into this category. This definition, however, provides a useful framework to differentiate firms according to the extent to which they are financially constrained. A

firm is considered more financially constrained as the wedge between its internal and external cost of funds increases. In general, their unconstrained or less constrained firms are those firms with relatively large amounts of liquid assets and net worth. In classifying firms, they were agnostic on whether the wedge between the cost of internal and external funds was caused by hidden information problems (Myers and Majluf 1984 , Greenwald, Stiglitz, and Weiss 1984, Jensen and Meckling 1976, Grossman and Hart 1982, Jensen 1986, Stulz 1990, and Hart and Moore 1995). In fact, unlike Blanchard, Lopez-de-Silanes, and Shleifer 1994 examined the effects of capital market imperfections on investment. They reviewed what economic theory has to say about the impact of financing constraints on investment. The impact of financing constraints on investments (FHP, 1988) was the first study to consider higher investment-cash flow sensitivities as evidence of greater financing constraints. Given the magnitude and the importance of this literature, it is surprising that little attention has been given to the theoretical foundation of the investment-cash flow sensitivity criterion.' While it is easy to show that constrained firms should be sensitive to internal cash flow while unconstrained firms should not, it is not necessarily true that the magnitude of the sensitivity increases in the degree of financing constraints. This is the crucial question, given that investment is sensitive to cash flow for the vast majority of firms analyzed. It is easy to justify this sensitivity based on the fact that external funds are more costly than internal funds for all firms as long as some trans- action costs are involved. The difficulty of interpreting cross-sectional differences in investment-cash flow sensitivities can be illustrated with a simple one-period model. Consider a firm that chooses the level of investment to maximize profits. The return to an investment, I, is given by a production function F (I), where F' > or < 0. Investment can be financed either with internal funds (W) or with external funds (E). The opportunity cost of internal funds equals the cost of capital, k, which, for simplicity, they set equal to 1. Because of information, agency, or risk aversion problems, they assumed that the use of external funds generates a burden cost, which-in a competitive capital market-is borne by the issuing firm. They represented (in reduced form) that additional cost of external funds with the function C (E,k), where E is the amount of external funds raised and k is a measure of a firm's wedge between the internal and the external costs of funds. It is natural to   assume that the total cost of

raising external funds increases in the amount of funds raised and in the extent of the agency or information problems (represented by k). All the priori measures of financing constraints used in the literature can be thought of as different proxies for k (which is unobservable) or of W (the availability of internal funds). Each firm, then, chooses I to maximize.

The increasing pay-performance sensitivity (PPS) on the sensitivity of investment to cash flow is high. Their motivation is to provide additional evidence on the usefulness of executive compensation in reducing agency costs and on the influence of managerial incentives on the severity of financial constraints on investment the impact of available cash flow on investment provides a more direct test of the influence of compensation on the tendency to overinvestment free cash flow. In addition to estimating the impact of PPS for the average firm. The sensitivity of investment to cash flow is reduced as PPS increases (John Paul et,al; 2004). The effectiveness of tax policy in altering investment behavior is an article of faith among both policy makers and economists. Whatever the grounds for this belief, its influence on postwar tax policy in the United States has been enormous. In 1954 and again in 1962 amortization of capital expenditures was liberalized by providing for faster write-offs (John Paul et,al; 2004). Since 1962 a tax credit for expenditure on equipment has been in force nor is tax policy in the United States a typical. As Otto Eck- stein (1998) has pointed out, tax devices to stimulate investment as the greatest fad in economic policy in the past ten years. In a period when the trends in the use of policy instruments were in the direction of more general, less selective devices, all sorts of liberalized depreciation schemes, investment allowances, and tax exemptions were embraced with enthusiasm all over the non-Communist world.

(v) Concept of dividend: Dividends are payments made by a corporation to its shareholders. When a corporation earns a profit or surplus, that money can be put to two uses: it can either be re-invested in the business (called retained earnings), or it can be paid to the shareholders as a dividend. Many corporations retain a portion of their earnings and pay the remainder as a dividend. For a joint stock company, a dividend is allocated as a fixed amount per share. Therefore, a shareholder receives a dividend in

proportion to their shareholding. For the joint stock company, paying dividends is not an expense; rather, it is the division of an asset among shareholders. Public companies usually pay dividends on a fixed schedule, but may declare a dividend at any time, sometimes called a special dividend to distinguish it from a regular one. Cooperatives, on the other hand, allocate dividends according to members' activity, so their dividends are often considered to be a pre-tax expense. A distribution of a portion of a company's earnings, decided by the board of directors, to a class of its shareholder is dividend. The dividend is most often quoted; in terms of the rupee amount each share receives (dividends per share). It can also be quoted in terms of a percent of the current market price, referred to as dividend yield. Dividends may be in the form of cash, stock or property. Most secure and stable companies offer dividends to their stockholders and their share prices might not move much. High-growth companies rarely offer dividends because all of their profits are reinvested to help sustain higher-than-average growth. Mutual funds pay out interest and dividend income received from their portfolio holdings as dividends to fund shareholders. In addition, realized capital gains from the portfolio's trading activities are generally paid out (capital gains distribution) as a year-end dividend. Mandatory distributions of income and realized capital gains made to mutual fund investors. (Source: investor.com, 2008)

A taxable payment declared by a company's board of directors and given to its shareholder out of the company's current or retained earnings. Dividends are usually given as cash (cash dividend), but they can also take in the form of stock (stock dividend) or other property. Dividends provide an incentive to own stock in stable companies even if they are not experiencing much growth. Companies are not required to pay dividends. The companies that offer dividends are most often companies that have progressed beyond the growth phase, and no longer benefit sufficiently by reinvesting their profits, so they usually choose to pay them out to their shareholders, also called payout(source: investor.com, 2008). Dividends are usually settled on a cash basis, as a payment from the company to the shareholder. They can take other forms, such as store credits (common among retail consumers' cooperatives) and shares in the company (either newly-created shares or existing shares bought in the market.) Further, many public companies offer dividend reinvestment plans, which automatically use the cash

dividend to purchase additional shares for the shareholder. Also referred to as "Dividend Per Share (DPS)". Forms of dividend are as follows :(i) Cash dividends (most common) are those paid out in the form of a cheque. Such dividends are a form of investment income and are usually taxable to the recipient in the year they are paid. This is the most common method of sharing corporate profits with the shareholders of the company. For each share owned, a declared amount of money is distributed. Thus, if a person owns 100 shares and the cash dividend is Rs. 0.50 per share, they will receive Rs. 50.00 in total.(ii) Stock or scrip dividends are those paid out in form of additional stock shares of the issuing corporation, or other corporation (such as its subsidiary corporation). They are usually issued in proportion to shares owned (for example, for every 100 shares of stock owned, 5% stock dividend will yield 5 extra shares). If this payment involves the issue of new shares, this is very similar to a stock split in that it increases the total number of shares while lowering the price of each share and does not change the market capitalization or the total value of the shares. (iii)Property dividends or dividends in specie (Latin for "in kind") are those paid out in form of assets from the issuing corporation or another corporation, such as a subsidiary corporation. They are relatively rare and most frequently are securities of other companies owned by the issuer, however they can take other forms, such as products and services. (iv) OtherDividends can be used in structured finance. Financial assets with a known market value can be distributed as dividends; warrants are sometimes distributed in this way.

For large companies with subsidiaries, dividends can take the form of shares in a subsidiary company. A common technique for "spinning off" a company from its parent is to distribute shares in the new company to the old company's shareholders. The new shares can then be traded independently. There are two metrics which are commonly used to gauge the sustainability of a firm's dividend policy. Payout ratio is calculated by dividing the company's dividend by the earnings per share. A payout ratio of more than 1 means the company is paying out more in dividends for the year than it earned. Dividend cover is calculated by dividing the company's cash flow from operations by the dividend. This ratio is apparently popular with analysts of income trusts in Canada. The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting

prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: the buyer and seller are typically motivated; both parties are well informed or well advised, and acting in what they consider their best interests; a reasonable time is allowed for exposure in the open market; payment is made in terms of cash in terms of financial arrangements comparable thereto; and the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."

 (vi) Concept of market value: Market value is the price at which an asset would trade in a competitive auction. Market value is often used interchangeably with open market value, fair value or fair market value. The current quoted price at which investors buy or sell a share of common stock or a bond at a given time, also known as "market price". In the context of securities, market value is often different from book value because the market takes into account future growth potential. Most investors who use fundamental analysis to pick stocks look at a company's market value and then determine whether or not the market value is adequate or if it's undervalued in comparison to it's book value, net assets or some other measure. The market capitalization plus the market value of debt referred to "total market value". International valuation standards defines market value as "the estimated amount for which a property should exchange on the date of valuation between a buyer and a seller in transaction . Market value is a concept different from market price, which is "the price at which one can transact". The concept is most commonly invoked in inefficient markets or disequilibrium situations where prevailing market prices are not reflective of true underlying market value. The market must be informationally efficient and rational expectations must prevail. Market value is also distinct from fair value in that fair value depends on the parties involved, while market value does not. Market value "requires the assessment of the price that is fair between two specific parties taking into account the respective advantages or disadvantages that each will gain from the transaction. Although market value may meet these criteria, this is not necessarily always the case. Fair value is frequently used when

undertaking due diligence in corporate transactions, where particular synergies between the two parties may mean that the price that is fair between them is higher than the price that might be obtainable in the wider market. In other words "special value" may be generated. Market value requires this element of "special value" to be disregarded, but it forms part of the assessment of fair value. The term is commonly used in real estate appraisal, since real estate markets are generally considered both informationally and transactionally inefficient. Also, real estate markets are subject to long periods of disequilibrium, such as in contamination situations or other market disruptions.

The major variables relating to internal finance and firm investment are as follows:

Capital stock: Capital stock is the replacement value of plant, property, and equipment of the year. In financial statement analysis, an increasing capital stock account tends to be a sign of economic health since the company can use the additional proceeds to invest in projects or machinery that will increase corporate profits and/or efficiency.

Cash flow: Cash flow is the operating income plus depreciation charges of the year: Cash flow (also called net cash flow) is the balance of the amounts of cash being received and paid by a business during a defined period of time, sometimes tied to a specific project. Measurement of cash flow can be used;

- to evaluate the state or performance of a business or project.
- to determine problems with liquidity. Being profitable does not necessarily mean being liquid. A company can fail because of a shortage of cash, even while profitable.
- to generate project rate of returns. The time of cash flows into and out of projects are used as inputs to financial models such as internal rate of return, and net present value.
- to examine income or growth of a business when it is believed that accrual accounting concepts do not represent economic realities. Alternately, cash flow can be used to 'validate' the net income generated by accrual accounting.

Cash flow as a generic term may be used differently depending on context, and certain cash flow definitions may be adapted by analysts and users for their own uses. Common terms (with relatively standardized definitions) include operating cash flow and free cash flow.

Payout ratio: Payout ratio is the ratio of dividend and operating income. The dividend payout ratio shows the portion of earnings distributed to stockholders. This interactive tutorial explains the concept by walking you through the calculations, including where to find the numbers on the income statement and cash flow statement.

Book value per share*: financial measure that represents a per share assessment of the minimum value of a company's equity. More specifically, this value is determined by relating the original value of a firm's common stock adjusted for any outflow (dividends and stock buybacks) and inflow (retained earnings) modifiers to the amount of shares outstanding,   calculated as : $BVPS \text{ X} \dfrac{VCE}{N}$

Where:

BVPS=   Book Value Per Share

VCE=   Value of Common Equity

N=   No of Share Outstanding

While book value of equity per share is one factor that investors can use to determine whether a stock is undervalued, this metric should not be used by itself as it only presents a very limited view of the firm's situation. BVPS provides a snap shot of a firm's current situation, but considerations of the firm's future are not   included.

For example, XYZ Corp, a widget producing company, may have a share price that is currently lower than its BVPS. This may not indicate that the XYZ is undervalued, because looking ahead, the growth opportunities for the company are vastly limited as fewer and fewer people are buying widgets.

2.02 Review of related studies conducted under different data set.

Various empirical studies have been conducted examining the relationship of internal finance and firm investment. In this section, some of the relevant and important empirical works accomplished by different scholars on the business investment decision together with the financial factors affecting it are attempted to review.

An important empirical study of internal finance and firm investment was conducted by Hubbard,R et,al (1995). They used value line data for 428 firms: 314 from the combined file, 34 from the research file and 80 from the full coverage file. The firm in the combined annual and research files are all listed on either the NYSE or the AMEX, and were generally quite large. By contrast, the full coverage files contained a number of smaller firms whose stock was actively traded. They focused on potential cross- sectional differences in investment patterns. The study included the manufacturing enterprises which involved consistent data. The sample size of the study was 428 firms. The firms included in the study were heterogeneous in terms of size of the firm.The estimated mean and median values for the capital stock revealed a considerable variation suggesting that there might be additional interesting cross sectional variation in the propensity to use debt financing (debt- assets ratio) and retention behavior (pay-out) . They gave statistic for 71 firms categorized as high dividend payout firm. These were selected according to their average payout ratio, defined as the ratio of dividends to operating income, in the two prior samples. The study avoided problems arising if firms make their dividend and investment decision on a basis of common factors that are unobservable to the econometrician.

 The free ash flow approach emphasizes managerial incentives which reward growth as one of the key factors underlying this theory. For instance, in term of debt plus equity, the size gap between the median the matured and non matured firm is closer to a factor rather than the factor of implied by the capital comparison. They used the Euler equation (Hubbard,R et,al, 1995) to estimate neoclassical model that assumes perfect capital markets. Having demonstrated that the standard model was rejected for the entire full

sample. It was also investigated whether that rejection was related to retention behavior. They used the high and low payout model to justify the result. The model performed quite well for the high payout firms but less satisfactory for the low payout firms. In addition, for the high payout firms the adjustment cost estimates were more plausible than the estimate typically derived from the Torbin's q- theory. Thus, for the high dividend payout firms the standard model seemed relatively satisfactory.

From the reviews of model and the empirical studies it showed that observed capital market value did not appear with the prediction of the efficient market hypothesis. The study used the Euler equation representing of firms' investment decisions. This estimation strategy reflected reservations with standard investment models based on the Torbin's- q with adjustment costs. In particular, this study argued well known problems in measuring marginal q, as well as observed stock market valuations as they might not accord with the predictions of the efficient markets hypothesis (owing either to irrational behavior or to the very problems of asymmetric information stresses in alternative models). Secondly it also explored the reason why the standard Euler equation for fixed investment did not fit well for all firms. In this investigation they analyzed data collected as the sample into several sub samples. A starting point was a comparison of the investment of one set of firms for which the neoclassical model is assumed to hold to the investment of another set for which "financing constraints" are assumed to be important. These samples were constructed based on pre-sample dividend payout ratios, with high payout" firms in the first sample and "Low –Payout" firms in the second. The standard model, in which there were no capital- market frictions, could'not be rejected for a sample of firms with high pre-sample payout ratio. On the other hand, the orthogonality condition implied by standard model is decisively rejected for firms with low pre-sample payout ratio. In trying to further understand these findings they examined several alternative explanations.

Their first alternative showed that the low –payout firms faced a particular type of financing constraint. For tractability the study assumed that financing constraints related to firms' cash flow, so that the effective discount rate for one of these firms depended on

its cash flow, one novel outcome of their estimation was that they used firm tax payments as an instrumental variable. The marginal product of capital is mismeasured, to the extent that the variable such as "Cash flow" is correlated with this measurement error. It was proxied for manager perceived profitability. Therefore an addition to the model could improve the regression result. Using tax payments as an instrument minimized the significance of this measurement error problem, since tax payment is very imperfectly correlated with firm profitability owing to such factors as tax –loss carry forwards and carry backs (see for example, Auerbach and Poterba, 1987). For firms for which the standard model fails, cash flow affected investment in a way suggested by their alternative model: it does not matter for the other firms.

A second alternative is to allow the effect of borrowing constraints in their extended model to very not only with firms 'individual fortunes but also with macro economic conditions. It reviewed the recent literature that emphasizes the spread between liquidity risk and default-risk free interest rates as a measure of the tightness of overall borrowing conditions. 'Specifically, they parameterize borrowing constraints so that both a firm's cash flow and their spreads affected the extent to constraints bind. Taking account of macroeconomic conditions it significantly improved the performance of the model.

Finally, it provided some evidence on the nature of the capital-market imperfections. The "free cash flow" model of Jensen (1986) and other suggested that observed links between investment spending and internal finance could reflect managers' decisions to ignore signals from market valuation in favor of overinvestment in growth . Hence, finding of a positive correlation between investment and cash flow did not show as evidence in favor of financing constraints. In fact, there is very little empirical works that can be used to discriminate between the free cash flow hypotheses and the financing constraints hypothesis, even though both hypotheses start from a presumption that information and incentive problems are important. To distinguish between the two alternatives, they contrasted the behavior of a set of mature firms and their business fixed investment as described by a standard Euler equation. Thus, while agency costs might be important in explaining other uses of firms' resources, it did not appear to be important for business

fixed investment. Analyzing investment demand begins with an expression for the value of the firm, which in turn stems from the arbitrage condition governing the valuation of shares. The after tax return to the owners of the firm at time t reflects capital appreciation and current dividends. In equilibrium, if the owners are to be content holding their shares, this return must equal their required return, R_{it} as specified below;

$$\frac{(1 - c) (E_t (V_i, t+1) - V_{it}) + (1 - \forall) E_t d_{i,t+1}}{V_{it}} = R_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots.(1)$$

Where, V_{it} is the value of firm i at time t; c is an accrual – equivalent capital gains tax rate: and E_t is the expectation operator conditional on information known at time t. The after tax capital gain of the current shareholders thus consists of the change in the market value of the firm less the component of this change due to new share issues. The dividends of the firm at time t+1 are $d_{i,t+1}$, and is the tax rate on dividends.

In the absence of any bubbles, solving (1) forward yields the following expression for the firm's market value at time zero, where $_{ij}$ is the firm's one period discount factor.

$$V_{i0} = E_0 \quad \sum_{t = 0}^{\mid} \quad \prod_{j = 0}^{t - 1} \mathcal{B}_{ij} \quad \frac{1 - \forall}{1 - c} d_{it} - S_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where, $S_{i,t}$ denotes the value of new shares issued at time t:

The firm maximizes equation (2) subject to five constraints. The first is the capital stock accounting identifies:

$$K_{it} = I_{it} + (1-)K_{i,t-1},\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(3)$$

Where K_{it} is the capital stock of firm i at the end of time t, I_{it} is its investment at time t and is the constant rate of economic depreciation. The second constraint defines firm dividends. Cash inflows includes , new share issues, and net borrowing, while cash outflows consists of dividend factor and interest payments, and investment expenditures.

$d_{it} = (1 - \emptyset)(F(K_{i,\,t-1}, N_{it}) - w_t N_{it} - \ni (I_{it}, K_{i,\,t-1}) - i_{t-1} B_{i,\,t-1}) + B_{it} + B_{it} - (1 - \oplus)B_{i,\,t-1} - P_{it} I_{it}$ ....(4)

Where:

d_{it} = dividend of firm i at time t

N_{it} = a vector of variable factors of production for firm i at time t,

W_t = a vector of real factor prices at time t,

B_{it} = the real value of net debt outstanding for firm i at time t,

I_t = the nominal interest rate paid on corporate bonds at time t.

^e_t = the expected inflation rate at time t.

p_{it} = the price of capital goods

= the corporate income tax rate,

$F(k_{i,t-1}, N_{it})$= the firm's real revenue function ($F > 0$, $F_{kk} < 0$,), and $\ni |f|\lambda t$,K_{it-1} = the real cost of adjusting the capital stock (э |Ч Ɛɔ ⤓Ҹ I Ɛɔ ⌐|Ф I Ɛэ |⌐|Ф I ƐΛ

The third constraint restricts dividends to be non negative.

d_{it} 0...(5)

The fourth constraint limit share repurchases. This restriction is necessary since the differential between the taxes on dividends and capital gains allows the firm to increase its value by cutting dividends and using share repurchases to distribute cash to its stockholders.

S_{it} S..(6)

The fifth constraint is a transversality condition which prevents the firm from borrowing an infinite amount to pay out as dividends:

$$\lim_{T|} \; \prod_{j=t}^{t-1} \; \text{\S}\!\text{\j} \quad B_{iT} = 0, |\neg t$$ ....(7)

Let, $_{it}$ be the series of lagrange multipliers associated with the constraints (5), and let m represent the ratio (1-)/(1- c). substituting (4) into (2) for d_{it} , and using (3) to eliminate

I_{it} from the problem, the first order condition for the capital stock (k_{it}) and the stock of net external debt (B_{it}) can be calculated as :

$$E_t \left\{ \frac{m \Gamma \}i,\ddagger \Gamma K}{m \Gamma \}z\ddagger} \left[F_k(k_{it}, N_{i,t\Gamma 1}) Z\OEligature_{k(i,t\Gamma 1, K_{it}}' \text{A}\Gamma \right. \right.$$
$$\left. f\Gamma Zu) \OEligature(I_{i,t\Gamma 1}, K_{it}) \Gamma \frac{P_{i,t\Gamma 1}}{(1 Zt)} ' X\OEligature(I_{it}, K_{i,tZ1)} \Gamma \frac{P_{it}}{(1 Zt)} \right\} \qquad ......\ldots\ldots..(8)$$

$$(m \Gamma \}_{it}) Zs_{it} (1 \Gamma (1 Zt) i_t Z f_t^e) E_t (m \Gamma \}_{i,t\Gamma 1}) X0 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(9)$$

To obtain an equation for investment, it is necessary to parameterize the adjustment cost function, $\ni f I_{it}, K_{i,t-1})$. The tradition in the q literature which shows equality between marginal and average q considers Summers (1981) and Hayashi (1982) which specify adjustment cost that are linearly homogeneous in investment and capital. A convenient parameterization that adheres to these constants is :

$$\ni (I_{it}, K_{i, t-1}) = \frac{\Im}{2} \left[\frac{I_{it}}{K_{i,t-1}} - v \right] I_{it} \qquad \ldots\ldots\ldots\ldots..(10)$$

Where the bliss point in the adjustment function is given by other specifications that satisfy the Hayashi (1982). By differentiating (10) with respect to I_{it}, and K_{it}, and substituting these results into (8), one obtains:

$$E_t \left\{ \frac{m \Gamma lz \ddagger \Gamma K}{\sim \Gamma lz\ddagger} f F_\xi f\xi z\ddagger \left[\rho z \ddagger \Gamma KA\Gamma \frac{a}{\Lambda} \left(\frac{\lambda z \ddagger \Gamma K}{\xi z\ddagger} \right)^{\Lambda} \Gamma \right. \right. \right.$$
$$\left. \left. f KZu A a \frac{\lambda z \ddagger \Gamma K}{\xi z\ddagger} \Gamma \frac{\sigma z \ddagger \Gamma K}{f KZt A} Z^{\wedge} \right) \right\} = r \left(\frac{I_{it}}{k_{i,t\Gamma 1}} \right) \Gamma \frac{p_{it}}{(1 Zt)} Zv$$

$$\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(11)$$

To derive the estimating equation for the null model of perfect capital markets they noted the case $_{it} = 0, |\neg t.$ so that equation (9) implies that

$= 1/(1+(1-t)i,- {}^e_t)$

It was also assumed that expectations were considered rational and allowed for an expectational error. $e_{i,t+1}$, where $E(e_{i,t+1}) = 0$ and $e^2_{i,t+1}) = u^2_e$. The error is uncorrelated with any information known at time t. They can then write equation (11) as:

$$\frac{1}{1 + (1 - \emptyset i_t - p^e_t)} \quad F_k(K_{it}\,N_{i\,t+1}) + \frac{\Im}{2}\,\frac{I_{i\,t+1}}{K_{it}}\,^2 + (1-d)\,\Im\,\frac{I_{it+1}}{K_{it}} + \frac{p_{i\,t+1}}{(1-t)} - \Rightarrow - \Im\,\frac{I_{it}}{K_{i\,t-1}}$$

$$-\frac{P_{it}}{(1-t)} + v = e_{i,\,t+1} \,\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(12)$$

To construct a parametric alternative model, one can take a variety of approaches. Depending on the nature of hypothesized deviation from perfect capital markets, one will be led to consider slightly different model. However, in order to estimate any of these alternatives, one must relate certain measures of the degree of financing constraints to some observable variables. As the last operational step that is necessary for tractability might include several theoretical models that can lead to the same empirical specification. For instance, following Hommelberg (1991), they defined the quantity $\%\ X(\}_{it} - {}_{i,t+1}) / (m + {}_{it})$ and then use this definition and their rational expectations assumption to write (11) as :

$$\frac{1 - \in_{it}}{1 + (1 - \emptyset\,i_t - \Leftrightarrow^e)} \quad F_k(K_{it}\,N_{i\,t+1}) + \frac{\Im}{2}\,\frac{I_{i\,t+1}}{K_{it}}\,^2 + (1-d)\,\Im\,\frac{I_{it+1}}{K_{it}} + \frac{p_{i\,t+1}}{(1-t)} - \Rightarrow - \Im\,\frac{I_{it}}{K_{i\,t-1}}$$

$$-\frac{P_{it}}{(1-t)} + v = e_{i,\,t+1} \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(13)$$

To move from equation (11) to (13), it had also made the assumption that the equality between and $1/(1+(1-t)i,- {}^e_t)$ continues to hold in the presence of finance constraints. In other word, they assume external financing markets uphold this arbitrage condition between the return on equity and debt, while financial constraints operate on the margin of the firm's dividend payout. If the firm faces a binding payout constraint today (relative to tomorrow), its behaviors constitutes a high and variable discount rate.

Alternatively, it is possible to incorporate financial factor by adding a constraint on the use of debt finance by firms. In particular, one can assume that outstanding debt B_{it}, must be less than a debt ceiling B_{it}^{*}, the ceiling, while possibly unobservable depends on measure of firm financial health, i.e. movement in firms' financial health will affect their ability to finance investment, holding constant actual investment opportunities. If S_{it} represents the series of Lagrange multipliers associated with the constraint that $B_{it} \quad B_{it}^{*}$ we can rewrite the first order condition in (9) as :

$$(m + \Leftarrow_{it}) - \int_{\!\! t} (1 + (1 - \varnothing i_t - \Leftarrow) E_t (m + \Leftarrow_{t+1}) - \in_{it} = 0 \ldots\ldots\ldots \ldots\ldots\ldots\ldots \quad (14)$$

To derive an estimating equation identical to (13), substitute (14) in to (11), using rational expectations, and defining ‰ $X(E_t\}_{i\,t+1} - i_{,t+1} + ‰_{it}(m\Gamma\}_{i,t\Gamma1)} /(m\Gamma\}_{it})) / E_t(m\Gamma\}_{i,t\Gamma1})$. This expression reinforces the idea that financial constraints would, in general, affect the firm's discount factor through both the dividend payout and borrowing constraints.

Finally, the study derived (13) by assuming further that the conditional covariance between $(m\Gamma\}_{i,t\Gamma1})/(m\Gamma\}_{it})$ and other t+1 dated variables assuming constant. In this it showed case‰ $_{it}$ $X\check{S}_{it} /(m\Gamma\}_{it})$.

Although somewhat arbitrary, this assumption allows us to develop a final interpretation of their alternative model (13) that emphasizes the effects of borrowing constraints.

In all three cases, under the hypothesis of perfect capital markets, both the constraints on outside debt and equity finance are redundant, so ‰ $_{it}$ X0. the multiplier $_{it}$ represents the value of a marginal rupee of cash flow to the firm. $_{it}$ is zero in period T when I is paying dividends. Under the assumption, a firm expecting to pay dividends in the current and future periods ($_{it}$= $_{i,t+1}$=0) would not face a high shadow cost of external finance, since the firm could reduce dividends payouts to finance investment (Tax capitalization model of firms dividend decision as a King, 1977 and Auerbach,1979). Hence in (13),

‰ X0; and the discount factor, $_{it}$ assumes the traditional form: $1/(1\Gamma(1\Gamma t)i_t \, Zf_t^e)$ using Generalized Method of Moments (GMM) to test for misspecification of (13). With a set of instrumental variables that are orthogonal to the error term, the orthoganality conditions should not be rejected for (13) under the null hypothesis of no capital market frictions (that is, where ‰ X0; and $_{it=0.}$) On the other hand, under the alternatives model with capital market friction, ‰$_{it}$ is not restricted to be zero. Hence, orthogonality condition associated with (13) under the assumption of the perfect- capital markets model should be rejected. Under the financing –constraint alternative, orthogonality condition should be rejected for non dividend –paying firms and accepted for high payout firms.

The empirical works of Kaplan and Zingles (1997) challenged the generality of the conclusion of large body of empirical results.Their study investigated the relation between investment cash flow sensitivity and financing constraints by undertaking an in-depth analysis of sample firms exhibiting an unusually high sensitivity of investment to cash flow. These firms were 49 low dividend firms that Fazza et, al;(1988) identified as financially constrained according to the investment cash flow criterion. They followed this sample for the same fifteen years from 1970 to 1984. For each firm they collected data from several sources. First, they collected letters to share holders, management discussion of operation and liquidity, financial statements, and the notes to those statements from the annual reports for each year. It was obtained standard accounting variables from COMPUSTAT except those for Coloco which they obtained from Coleci's annual reports. They estimated the following regression for several models of investment:

$$\frac{I_{i,t}}{K_{i,t Z1}} X s_1 Q_{i,t Z1} \, \Gamma \, s_2 \, \frac{CF_{i,t}}{K_{i,t Z1}} \, \Gamma ....\Gamma \sim_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..(15)$$

Where $I_{i,t}$ represents investment or capital expenditure for firm i during period t; $K_{i,t-1}$ is the beginning of period t capital stock defined as net property, plant and equipment for firm i; $CF_{i,t}$ is the cash flow defined as the sum of earnings before extraordinary items and depreciation for firm i during period t; $Q_{i,t-1}$ denotes the market value of assets divided by the book value of assets for firm I at the beginning of period t; and $\mu_{i,t}$ is an error term.

Their analysis indicated that the investment cash sensitivity criterion as a measure of financing constraints did not well –ground in theory and was not supported by empirical evidence it documented was pervasive and affected many of the results in the literature. This study argued that, if non-monotonicity result is general, then it will be important to understand its source. One explanation involves understanding the shape of the cost function of raising external finance where external finance is costly because of information or agency problem. Alternatively, it is possible that the non-monotonic behavior of investment cash flow sensitivity is driven by a mischaracterization of the reasons why firms are reluctant to raise external finance. The study showed that the most financially successful and least constraint firms in their sample appeared to rely primarily on internal cash flow to invest despite the availability of additional low cost funds and, therefore, exhibited high investment cash flow sensitivity.

Michael C. Jensen (1986), in his empirical study, tried to focus on corporate managers as the agents of shareholders, a relationship fraught with conflicting interests. Agency theory, the analysis of such conflicts, is now a major part of the economic literature. The payout of cash to shareholders creates major conflicts that have received little attention. (Gordon Donaldson1994 in his study of 12 large fortune 500 firms), payouts to shareholders reduces the resources under managers' control, thereby reducing managers' power, and making it more likely to watch capital markets when the firm must obtain new capital (M. Rozeff, 1982; F. H. Easterbrook, 1984). Financing projects internally avoids watching capital market and fund availability involves only at high explicit prices. Managers have incentives to cause their firms to grow beyond the optimal size. Growth increases managers' power by increasing the resources under their control. It is also associated with increases in managers' compensation; because changes in compensation are positively related to the growth in sales (Kevin Murphy, 1985). The tendency of firms was to reward middle managers through promotion rather than year-to-year bonuses. It also creates a strong organizational bias toward growth to supply the new positions that such promotion-based reward systems require (George Baker, 1986). Competition in the product and factor markets tends to drive prices towards minimum average cost in an activity. Managers must therefore motivate their organizations to increase efficiency to

enhance the probability of survival. However, product and factor market forces are often weaker in new activities and activities that involve substantial economic rents or quasi rents (rents are returns in excess of the opportunity cost of the resources to the activity.) In these cases, monitoring by the firm's internal control system and the market for corporate control are more important. Activities generating substantial economic rents or quasi rents are the types of activities that generate substantial amounts of free cash flow. Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital and conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow. The problem was how to motivate managers to disgorge the cash rather than investing it at below the cost of capital or wasting it on organization inefficiencies (Kaplan and Zingles; 1997). The study treats to develop theory which explains;

1) the benefits of debt in reducing agency costs of free cash flows,

2) how debt can substitute dividends,

3) why "diversification" programs are more likely to generate losses than takeovers or expansion in the same line of business or liquidation-motivated takeovers,

4) why the factors generating takeover activity in such diverse activities, and

5) why bidders and some targets tend to perform abnormally well prior to takeover.

The study showed that the free cash flow theory of capital structure which could explain previously puzzling results on the effects of financial restructuring. The paper by Clifford Smith (1985 and 1986) summarized more than a dozen studies of stock price changes at announcements of transactions which change capital structure. Most lever-age-increasing transactions, including stock repurchases and exchange of debt or preferred for common, debt for preferred, and income bonds for preferred, result in significantly positive increases in common stock prices. The 2-day gains range from 21.9 per- cent (debt for common) to 2.2 percent (debt or income bonds for preferred). Most lever- age-reducing transactions, including the sale of common, and exchange of common for debt or preferred, or preferred for debt, and the call of convertible bonds or convertible preferred forcing conversion into common, result in significant decreases in

stock prices. The 2-day losses range from -9.9 percent (common for debt) to -.4 percent for call of convertible preferred forcing conversion to common). Consistent with this, free cash flow theory predicts that, except for firms with profitable unfunded investment projects, prices will rise with unexpected increases in payouts to shareholders (or promises to do so), and prices will fall with reductions in payments or new requests for funds (or reductions in promises to make future payments).

Steven, N et, al; (1997) tried to find out the answer of the question "do investment-cash flow sensitivities provide useful measures of financing constraints?" . It was examined by studying the each firm's annual report for each sample year and management's discussion of liquidity that describes the firm's future needs for funds. In this process, the above information was analyzed with referred the theories it plans to use to meet those needs. The authors integrated information with quantitative data and with public news to derive as complete a picture as possible of the availability of internal and external funds for each firm demand for funds. On that basis they ranked the sample firms on the basis of extent of financial constraint each year. They used the firm-year classifications to group the sample firms over seven- or eight-year sub-periods, and over the entire sample period. Finally, it compared investment-cash flow sensitivities across the different groups of firms for the entire sample period, for sub-periods, and for individual years. Surprisingly, it was reported that only in 15 percent of firm's ability to access internal or external funds to increase investment. In 85 percent of the firms it was increase their investment in many cases. In fact, almost 40 percent of the sample firms, it could increase their investment every year of the sample period. Its partially qualitative measured of financial constraints were strongly corroborated by quantitative data on debt to total capital, interest coverage, the presence of restrictions on dividends, and financial slack (the level of cash and unused line of credit relative to investment). More strikingly, those firms classified as less financially constrained exhibit significantly greater investment-cash flow sensitivity than those firms classified as more financially constrained. It was also shown that the pattern for the entire sample period, for sub-periods, and for individual years was also robust to different criteria to divide constrained and unconstrained firms. For example, the firms with healthy interest coverage in every sample year or in every sub-period year

were followed by investment-cash flow sensitivities twice as large as the remaining firms in the sample. There was no strong theoretical reason for investment- cash flow sensitivities to increase monotonically with the degree of financing constraints. Nevertheless, it considered several possible reasons why estimated investment-cash flow sensitivities could decrease in the degree of financing constraints even if the true relationship was increasing. (i) Cash flow might act as a proxied for investment opportunity not captured by Tobin's q and do so differentially across firms. Its results, however, were shown robust to the use of an Euler equation test (Bond and Meghir ,1994), which did not rely on Tobin's q and thus was not affected by its mismeasurement. (ii) Differences in sensitivities might be driven by a few influential outliers. It found evidence that the high overall sensitivity of their sample (FHP's ,1988) low dividend payout firms relative to FHP's higher dividend payout firms is explained by a relatively few company-years characterized by exceptionally high sales growth. (iii) The outliers did not explain their cross-section results that the least constrained firms showed highest sensitivities. (iv) The finding of nonmonotonic relationship is reported to be specific to a few distressed firms that forced to use cash flow to repay their debt, and could not apply to more "normal" samples. The financial conditions of the constrained firm did not show consistent with that hypothesis. In sum, they provided both theoretical reasons and empirical evidence that a greater sensitivity of investment to cash flow did not show a reliable measure of the differential cost between internal and external finance. In so doing, they addressed (and refute) the criticisms in Fazzari, Hubbard, and Petersen (1996). They concluded the paper with a discussion of the generality of their results. They argued that the investment can be financed either with internal funds (W) or with external funds (E). The opportunity cost of internal funds is said to be equal with the cost of capital, R, which, for simplicity, they set equal to 1, because of information, agency, or risk aversion problems. They assumed that the use of external funds generates a deadweight cost, the cost of external fund with the function C(E,K), where, E is the amount of External fund raised and K is a measure of a firm's wedge between the internal and the external costs of funds.

Each firm then chooses I to maximize, Max F (I) = C (E, K)-I, Such that

$I=W+E$……………………………………………………………………………………………………(16)

Where, I = Amount of investment

       W= Amount of internal fund

       E= Amount of External Fund

The empirical literature reviewed typically deflated all the variables by the value of capital (net property, plant, and equipment) at the beginning of the fiscal year. The method provides consistent estimates if all variables are recorded at short intervals or if there is no growth. In practice, however, neither of the two assumptions was satisfied. Variables were recorded at annual intervals, and companies grew substantially over the sample period. The study showed that both investment and cash flow grew at a rate similar to the growth rate of sales, then part of the co-movement of investment and cash flow might be due to a scale factor. That effect would bias the estimates of the investment-cash flow sensitivity toward one, particularly in firms with higher annual growth rates. To account for this possibility, the study estimated regressions that excluded firm-years with more than 30 percent sales growth (the upper quartile). When they eliminated these observations, the median rate of sales growth for the constrained, possibly constrained, and not constrained firms is essentially equal (between 11 percent and 12 percent). The investment-cash flow sensitivities decline substantially. Nevertheless, the pattern across the three groups of firms remains qualitatively the same, and the difference in sensitivities is still statistically significant. Finally, they obtained qualitatively and statistically similar results (in unreported regressions) when they applied a robust estimation technique that down weights outliers. In sum, their cross-sectional results were not driven by outliers. The same couldn't be said for the overall results in (FHP, 1988). Eliminating or down weighting high growth firm-years reduces the estimated investment-cash flow sensitivity of the entire low dividend payout sample to between 0.20 and 0.25. That was effectively identical to the estimate of 0.23 obtained by FHP for their unconstrained, high payout firms. Given that these firms were less likely to experience such extreme growth rates, these results indicated that FHP's overall findings (across payout classes) are at least partially driven by extreme observations.

Unfortunately, this problem was not likely to be restricted (FHP, 1988). Any splitting criterion that sorted firms into sub-samples with differential outliers in growth rates, splits on size and dividend payout ratios-might be biased toward finding a difference in coefficients on cash flow. That bias might partially account for the large body of evidence finding higher investment-cash flow sensitivity in fast growing companies that tend to be classified as financially constrained.

The empirical work of Franco Modigliani et,al; (1958) addressed the cost of capital to the owners of a firm is simply the rate of interest on bonds. He derived the familiar proposition that the firm, acting rationally, tend to push investment to the point of interest. He argued that the proposition could be shown to follow from either of two criteria of rational decision-making which are equivalent under certainty, namely (1) the maximization of profits, and (2) the maximization of market value. The use of debt rather than equity funds to finance a given venture may well increase the expected return to the owners, but only at the cost of increased dispersion of the outcomes. Under these conditions, the profit outcome of alternative investment and financing decisions could be compared and ranked only in terms of a subjective "utility function" of the owners which weighs the expected yield against other characteristics of the distribution. Accordingly, the extrapolation of the profit maximization criterion of the certainty model has tended to evolve into utility maximization, sometimes explicitly; more frequently in a qualitative and heuristic form. The utility approach undoubtedly represented better approach over the certainty or certainty-equivalent approach. Although the emphasis placed on partial-equilibrium analysis, the results obtained also provided the essential building blocks for a general equilibrium model.

The model is as follows:

$$P_j \, X \frac{1}{P_k} \, \overset{z}{x}_{ji} \quad \dots\dots\dots\dots\dots\dots\dots\dots..\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots...(17)$$

Where, P_j denotes the price and is $\overset{z}{x}_{ji}$ the expected return per share of the jth firm in cost k, and $1/P_k$ is the proportionately factor for cost k.

Robert J (1989) studied the changes in relative prices-such as those for energy relative to other goods-may move the stock market in one direction and the incentive to invest in the other direction. The marginal q (associated with investment in the new capital, which is suited to the current configuration of relative prices) may rise, while average q (associated with the existing capital) falls. Tax changes, especially when they treat old and new capital differently, can have similar effects. If the data refer to average q, as is typically the case, the theory will perform well only if the dominant disturbances relate to changes in the prospective returns on all forms of capital or to shifts in market discount rates.

The established empirical view (von Furstenberg,1977, Clark 1979, and Summers 1981,) measures the market value of capital (q-type variables). It provided only limited explanatory power for investment. Furthermore, when measured of corporate profits or production or similar variables were considered, the statistical significance of the market-valuation variables tends to disappear. Of course, corporate profits and production are simultaneously determined with investment, and that simultaneity could account for the explanatory value of these variables. But the view in the empirical literature is that even predetermined values of variables like profits or production leave market-valuation measured with little predictive power for investment. This conclusion appeared to conflict with the strong relations between investment (and other macroeconomic variables, such as gross national product) and stock market returns. This is also subscribed by Fama (1981) and Barro (1989). Their explanation is that the stock market does better than the measures of q as used in previous empirical studies of investment. The investment variable consists of expenditures on capital goods and is therefore gross of depreciation. In some models, adjustment costs pertained to gross expenditures rather than net investment. It is gross investment that relates naturally to q-type variables. However, in other settings (in which replacement expenditures do not entail any adjustment cost), it reported to be net investment that would be associated with q. The study also reported that available measures of depreciation are largely arbitrary; the choice of gross investment tends to be dictated on grounds of data availability.

John Paul et,al;(2004) using sample period for the fiscal year-ends 1993-1997, a time period characterized by strong economic growth, showed evidence of free cash flow problems and financial constraint. The strong economic environments contributed to the ability of firms to produce cash flow. The firms in their sample showed presence of free cash flow problems and found less financially constrained. Using detailed compensation data over their sample period, they estimated chief executive officer (CEO) incentives that incorporate both stock and stock option holdings to measure the alignment of managers' and shareholders' interests. Rather than focusing on the relation between Pay Performance Sensitivity (PPS) and the level of investment, they concentrated on the impact of subsequent investment of cash flow. They contended that estimating the impact of available cash flow on investment provides a more direct test of an influence of compensation on the tendency to over invest free cash flow. In addition to estimating the impact of PPS for the average firm, they subdivided their sample to enable to isolate the hypothesized effects of agency costs from those of financial constraints. For their full sample, they found the sensitivity of investment to cash flow reduced as PPS increases. This finding was consistent with the hypothesis that a stronger alignment interest reduces the tendency of managers to invest free cash flow. Their examination of sub-samples based on Tobin's q and commercial paper ratings confirms this conclusion. Consistent with free cash flow theory, they found that the negative impact of PPS on investment-cash flow sensitivities was concentrated in low q firms. The negative relation concentrated in unrated firms suffered from the information asymmetries predicted to produce a positive relation. They found no evidence that incentives exacerbate the severity of financial constraints, even for a sub-sample of firms with ample investment opportunities and a high level of information asymmetry (high q firms with no commercial paper rating). They found sub-sample evidence that PPS played a role in reducing the underinvestment of cash flow due to managerial shirking.

The author used the following model:

$$\frac{I}{K}_{i,t} = r_1 \frac{S}{K}_{i,t} + r_2 q_{i,t} + r_3 \frac{CASH}{K}_{i,t} + r_4 \frac{CF}{K}_{i,t} + r_5 PPS_{i,t} \frac{CF}{K}_{i,t} +$$

$$r_6 In(MVE_{i,t}) \frac{CF}{K}_{i,t} + r_7 TENURE_{i,t} \frac{CF}{K}_{i,t} + t_t + \}_i + \ldots\ldots\ldots v_{i,t} \ldots\ldots\ldots\ldots\ldots(18)$$

Where, Firm i and year t, I is investment (capital expenditures), K is the beginning of period capital stock (net property , plant and equipment), S is sales , q is the beginning of period estimate of Tobin's q , CASH is beginning of period cash plus marketable securities , CF is cash flow net of common and preferred dividends, PPS is beginning of period total PPS for the firm's CEO, MVE is the beginning of period market value equity, and TENURE is the CEO's length of tenure (years) in that office. The parameter $‡_t$ is a year fixed effects, $\}_i$ is a firm fixed effects, and $v_{i,t}$ is the error term. For variable other than PPS and TENURE (based on ExecuComp data), The co-efficient Γ_4 on the cash flow variable and the coefficients Γ_5, $_6$, and $_7$ on the three interaction variables combine to estimate the sensitivity of capital spending to cash flow.

Robert E et,al; (1967) examined the efficacy of tax stimulus the belief was based on the possible that businessmen in pursuit of gain by purchase of capital goods in less cost. Previous studies limited to calculate of effects of tax policy on the cost of capital services. The study showed the relation between these changes in the cost of capital and actual investment expenditures. The another purpose study was to show the relationship between tax policy and investment expenditures using the neoclassical theory of optimal capital accumulation. It measured the cost to the business firm of employing fixed assets. That cost depends on the rate of return, the price of investment goods, and the tax treatment of business income. Likewise, it determined empirically the relation between the cost of employing capital equipment and the level of investment expenditures. That relationship was a straightforward generalization of the familiar flexible accelerator theory of investment. The study obtained an estimate of the distribution over time of the investment expenditures resulting from a given increment in the desired level of capital services; then estimated amount of investment resulting from a change in tax policy and its distribution over time. It reported of effects;
- o the adoption of accelerated methods for computing depreciation for tax purposes in 1954,
- o the investment tax credit of 1962,
- o the depreciation guidelines of 1962,and
- o The adoption of write-off in 1954 in place of less drastic accelerated depreciation.

It showed that tax policy was highly effective in changing the level and timing of investment expenditures. The authors found that tax policy had important effects on the composition of investment. On the other hand, the investment tax credit and depreciation guidelines shift toward equipment.

Lamont (1997), in his empirical study, examined the relationship between investment and cash flow. He argued that investment be reduced if its cash flow or collateral value falls, but the profitability of its investment opportunities stays constant or rises. By examining how different parts of the same firm reacted to the 1986 oil price decline. He concluded that the firms reduced the cash flow and collateral value of oil firms.   Using the COMPUSTAT database, he identified a group of firm that had corporate segment both in the oil extraction industry and in non-oil industries for the 1985-1986 periods. He selected 26 firms with 40 segments. Out of these 40 observations, he became able to calculate industry- adjusted figure for 39 observations. He then tested the hypothesis: that large cash flow/ collateral value decreases to a corporation's oil segment decrease investment in its non oil segment, by running the following regression equitation with some modification:

$$\frac{I}{K} \mathrm{X} a \, \Gamma \, bQ \, \Gamma \, c \frac{cash}{K} \, \Gamma \, yeardummy \, \Gamma \, firmdummy ....………………...……...…(19)$$

Where, I is the investment, K is the capital stock at the beginning of the period's is Tobin's q, and cash is a measure of cash flow or cash stock. Unfortunately, he did not absorb physical assets (K) for corporate segment. Further, since asset sale were likely to be a problem during that period, changes in the size of the segment could drive changes in capital expenditure. Therefore, he focused on the ratio of contemporaneous investment to contemporaneous sales, I/S. The basic empirical strategy was to test the hypothesis in several ways. He imposed few assumptions on the data and looked only at means and median. He further focused on the change in the investment to sales ratio between 1985 and 1986. Having established that investment fall in this period, he attempted to explain this fall by looking at the performance of these non oil segment and the pattern of inter-segment subsidy in 1985, looking at levels of investment in addition to changes in

investment. Last, he came as close as possible to testing the standard equation 19 using oil cash flow and non oil investment. However, with segment data it was impossible to observe Tobin's q for each segment, since individual corporate segment did not usually issue equity. He paid particular attention to industry adjusted data.

Another important study of firm investment decision in the presence of financial constraints was conducted Fazzari et, al; (1988). They used value line data for 422 large U.S. manufacturing firms over the 1970 to 1984 time period to analyze differences in investment behavior by firms classified according to dividend payout policy. Their 49 class 1 firms had a dividend payout ratio of less than 10 percent in at least ten of the fifteen years. They classified 39 firms that had a dividend payout ratio between 10 percent and 20 percent as class 2 firms and all 334 other firms in their sample as class 3 firms. They argued that firms with higher retention ratios face higher informational asymmetry problems and more likely to be liquidity constraints. According to them, the class 1 firms are more likely, a priori, to have been financially constrained. In their analysis they found that the class 1 firms have a investment cash flow sensitivity that is significantly greater than that firms that pay higher dividends. They run the following regression for several models of investment:

$$\frac{I}{K}_{it} X f(\frac{X}{K})_{it} \Gamma g(\frac{CF}{K})_{it} \Gamma ....\Gamma \sim_{it} \ldots\ldots \ldots\ldots\ldots \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(20)$$

Where, I_{it} represent investment in plant and equipment for firm i during period t: K is the book value of net property, plant, and equipment in the beginning period; f(X/K) is a function of variable related to investment opportunities; g (CF/K) is a function of current cash flow which measure firm liquidity; and μ_{it} is an error term.

Their analysis focused on the theory of investment, which suggests that f(X/K) is represented by a firm's Tobin's q value. The investment of firms that exhaust all their internal finance is found to be much more sensitive to fluctuations in cash flow than that of mature, high dividend firms. They arributed these result to a financing hierarchy in which internal funds have a cost advantage over new equity and debt. They interpreted

greater investment cash flow sensitivity for firms considered more likely to face a wedge between the internal and the external cost of funds as evidence that the firms are more financially constrained are more sensitive to firm liquidity than those of less constrained firms .

Another author Alti (2003) analyzed the sensitivity of a firm's investment to its own cash flow in the benchmark case where financing was frictionless. The calibration and simulation procedure were used in the study. The simulations were carried out to generate a data similar to that of fazzari et al (1988) that used value line data for 422 large U.S. manufacturing firms over the 1970 to 1984 period. This study specified a slightly different sorting criterion than the one in Fazzari et, al; 1988, since model firms initiated dividends at a rather higher rate. Firms that paid no dividend for at least 10 out of 15 years were to class 1. Firms that paid no dividend for at least 5 out of 9 years were assigned to class 2. All other firms were assigned to class3. The artificial data set was constructed. For each firm, data was simulated for 100 years. Then a random year j was chosen between 1 and 86, inclusive. The data of the firm between years j and j+14 were extracted, and the firm was assigned to one of the three classes described above based on its dividend payout in these 15 years. This procedure was continued until each class has 3000 firms. The regression model was set as below:

$$\frac{I_{i,t}}{K_{it}} \times c_i \ulcorner c_1(CF_{i,t} / K_{i,t}) \ulcorner c_2 q_{it} \ulcorner .... \ulcorner e_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(21)$$

Where $I_{i,t}$ is the investment of firm i in year t; CF_{it} is the cash flow in the same year; K_{it} is the capital sock at the beginning year t; and q_{it} is the beginning of the year Tobin's q, defined as the total market value of the firm normalized by K_{it}. The fixed firm effect c_i, is the cash flow sensitivity and c_1, and the investment q sensitivity c_2 are coefficients to be estimated; and e_{it} is the error term.

The last but not least, Peyer and Shivdasani(2001), studied the internal allocation of resources for diversified firm that completed a leveraged recapitalization. They found that

before the recapitalization, internal capital market allocated investment becomes less sensitive to q and more sensitive to cash flow. They showed that firm value is positively related to investment's sensitivity to segment q and negatively related to investment's sensitivity to segment cash flow. Their analysis highlights an indirect cost of debt that has received little attention; pressure to meet interest obligations creates an incentive to emphasize investments that generate high levels of current cost flow.

Review of Nepalese Studies:

A study "The Relationship between firm investment and financial status of Nepalise enterprises a Master degree unpublished thesis (Mahesh Chaudhari, 2003), showed relationship between investment and firm financial status.

The study was based on secondary data only. This study used pooled cross-sectional data of 33 enterprises this gives 123 observations for the period of 1996/97 to 2000/01. The required firm level data were derived from balance sheet, income statement and other financial statements of the selected enterprises from the website of NEPSE Ltd. This study did not cover all the Nepalese enterprises because of data problem and also as the study period began only from fiscal year1996/97. Sixty-three out of 96 enterprises had been excluded in the study because financial statements for the study period could not be obtained for these enterprises. The study showed that 63 enterprises excluded from the study showing data were not relatively the major enterprises considering the study period of 1996/97 to 2001/02. There were 123 observations selected out of 165 populations which were 74.55 percent in total.

The study used the econometric models to examine the relationship between Nepalese firms' investment and their financial status. The hypothesis of the study was that the investment in fixed assets (I_{FA}) could be determined by market value to book value of equity (M/B) and cash flow (CF). The theoretical statement might be framed as follows:
$I_{FA} = f(M/B,CF)$……………………………………………………………….. (22)

The equation to be estimated has, therefore, been specified as under:

$$\frac{I_{FA}}{K} = r + s_1 \frac{M}{B} + s_2 \frac{CF}{K} + \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots + \sim_i \dots \dots \dots \dots \dots ..(23)$$

Where, dependent variable, IFA /K had been specified as the investment in fixed assets during the year to the net fixed assets at the beginning of the year.

The independent variables are specified as:

M/B = Firm's common equity market value to book value ratio based on the previous year's actual market value at year-end.

CF/K = Current period cash flow to the firm as measured by net income plus depreciation during the year to the net fixed assets at the beginning of the year.

Uj   = Disturbance or error term.

The study focused on investment decision with major functioning to perform continuously by financial manager in the normal course of business. Current assets and fixed assets were mainly the two types of assets which the business enterprises decide to invest in. Among several determinants of firm investment, the financial status of firm was assumed as a major one. Current ratio, interest coverage, income margin, sales growth, debt ratio, market value to book value of equity ratio, cash flow, and dividend payout ratio are considered to be very important variables that determine the financial status of the business enterprises. If all these variables were at the optimal level, the financial position of a firm is said to be sound.

This study was assessed the relationship between firm investment and financial status of Nepalese enterprises. Its specified objectives were: (1) to compare investment-liquidity sensitivities across different groups of Nepalese enterprises; (2) to examine the relationship between firm investment and financial status variables; and (3) to analyze the properties of portfolios formed on firm investment of Nepalese enterprises.

The study provided following findings and conclusion:

) Investment in the fixed assets is related to net sales,

) The increase in the cash flow tends to increase to investment in fixed assets,

⟩ Fixed investment of the enterprises paying medium (i.e., neither very high nor very low) dividend at the beginning of the year is more sensitive to the availability of cash flow during the years as compared to the enterprises paying higher or lower dividend at the beginning of the year.

The study recommended the following suggestions:

⟩ The companies should increase cash flows to increase fixed investment, as expansion and diversification are the two important strategic options for them in order to remain competitive in the market and to get strategic advantages.

⟩ The first priority should be given to internal funds to finance assets of the enterprises because they possess a cost advantage over external funds in incomplete and imperfect capital markets such as Nepalese capital market.

⟩ The companies should make efforts to pay regular and medium (i.e.. neither very high nor very low) dividend to increase the market price of their stocks as well as to generate sufficient internal funds.

⟩ Market value to book value of equity was not to be considered as a significant determinant of fixed assets while making investment decisions in the context of Nepalese enterprises.

⟩ The companies should increase income, sales, and interest coverage to increase their assets since these variables have positive relationship with investment in fixed assets, current assets, and total assets.

⟩ Current ratio and debt ratio were to be decreased in order to increase firm investment due to the negative relationship of both of these two variables with investment in current assets, fixed assets, and total assets.

⟩ Net sales growth should be considered as a most important factor among various financial status variables for expanding the business operations as it had stronger explanatory power in predicting firm investment is compared to other related variables.

⟩ Liquidity, leverage, total assets turnover, dividend payout, price-earning, and market value to book value of equity ratios should be maintained to the optimum level because of increasing values of these variables resulting in decreasing investments

in assets of the enterprises.

⟩ The companies should increase profitability and fixed assets turnover in order to increase investment in fixed assets, current assets, and total assets because of the positive relationship of these variables with firm investment.

⟩ A particular attention is to be paid to utilize the optimum level of leverage in case of expanding business activities, as interest payment is tax deductible.

iv. To analyze the properties of portfolios formed on firm investment of Nepalese enterprises.

2.03 Concluding remarks:

From the review of the above literature, it is concluded that the failure of neoclassical investment models explained firm-level investment behavior due to the assumption of frictionless capital markets. While recent empirical studies have concluded that internal funds could be important determinant of investment for many firms in the presence of information of capital markets. Models of investment demand based on Tobin's q or models that used stock market valuation as a proxy for the expected future profitability of invested capital requires additional strong assumptions about the efficiency of capital markets. Likewise, a link between investment and internal funds, holding investment opportunities constant, could also reflect wasteful investment spending by non-value maximizing corporate managers. The theorist has concluded that the cost of capital to the owners of a firm is simply the rate of interest on bonds; and has derived the familiar proposition that the rational firm tend to push investment to the point of interest. This proposition can be shown to follow from either of two criteria of rational decision-making which are equivalent under certainty,

⟩ the maximization of profits and ,

⟩ the maximization of market value.

Under uncertainty, a mutually exclusive outcome of subjective probability distribution is corresponded to each decisions of the firm. The use of debt rather than equity funds to finance might well to increase the expected return. The profit outcomes of alternative investment and financing decisions could be compared and ranked only in terms of a

subjective "utility function". According to the extrapolation of the profit maximization criterion of the certainty model has tended to change into utility maximization. The utility approach certainly represents the advance approach over the certainty-equivalent approach. It permits to explore (within limits) some of the implications of different financing arrangements, and it gives meaning to the "cost" of different types of funds. However, the cost of capital has become an essentially subjective concept. How for example, is management to ascertain the risk preferences of its stockholders and to compromise among their tastes? And how can the economist build a meaningful investment function in the fact of given investment opportunities? The alternative approach, based on market value maximization, could be provided the basis operational definition of the cost of capital and a workable theory of investment. Under this approach any investment project associated financing plan must pass by the following test: will the project, as financed, raise the market value of the firm's shares? If so, is it worth undertaking; if not, does its return less than the marginal cost of capital to the firm? It is noted that such a test is entirely independent of the tastes of the current owners, since a market price reflects not only their preferences but also those of all potential owners. If any current stockholder disagreed with management and the market valuation of the project, it is free to sell out and reinvest elsewhere. The advantages of the market-value approach have long been appreciated; yet analytical results have been meager.

Many of the studies point out that there is a lack of an adequate theory of the effect of financial structure on market valuations, and of how these effects could be inferred from objective market data. The studies reviewed concluded development of a theory and of its implications for the cost-of-capital. The studies went on developing the basic theory itself and to give some brief account of its empirical relevance. The studies showed how the theory could be used to answer the cost-of-capital question and how it permits to develop a theory of investment of the firm under uncertainty. The approach is essentially a partial-equilibrium on focusing on the firm and "industry." Accordingly, the "prices" of certain income streams treated as constant model, just as in the standard Marshallian analysis of the firms and industries prices of all inputs and of all other products. The studies focused

on the level of the firms and the industries that the interests of the various specialists concerned with the cost-of-capital problem come most closely together.

The findings of many empirical studies related business investment to q (the ratio of the market's valuation of capital to the long-run cost of acquiring new capital). A typical finding was that q-measures limited predictive value for investment. In contrast, it found for that lagged changes in real stock market prices had great deal of explanatory power for the growth rate of investment. Empirically, changed in q are dominated by movements in the market value of equity; the changes in the market value of net debt and in the stock of capital at estimated reproduction cost were relatively minor. Therefore, the main reason for the results was that the equity component of the q variable turns out to be proxied for market value of stock. In the presence of cash flow, the stock market value retained significant predictive power for investment. An overall interpretation of studies showed that the results were an exogenous disturbance (such as an increase in the prospective rate of return on capital) as an increase in stock prices and corporate profits. It also showed the expansion of investment expenditures tends to increase in profits. It examined the stock market crashed subsequent investment spending performed worse than the stock market. The studies reviewed that the relation between stock prices and investment (or GNP) was systematically different in the context of stock market crashes. For a simple relation between investment and stock price changes (and corporate profits) looked similar. Stock market had more predictive power in the investment. Some possible explanations for this puzzling finding were discussed, but none of the explanations seemed very convincing. The effects of changes in tax policy on investment behavior were not well for tax revisions. The effects of accelerated depreciation were very substantial, especially for investment in structures. The effects of the depreciation guidelines were significant, but these effects were confined to investment in equipment. The effects of the investment tax credit were doubt about the efficiency of tax policy in influencing investment behavior. These tax policies represented a progressive liberalization of depreciation for tax purposes. It showed to get some ideas of those effects for further liberalization. The tax policy represented the ultimate liberalization since it was equivalent to treating capital expenditures for tax purposes.

The general conclusion that emerges from these and several others studies conducted in the area of internal finance and investment behavior of firms can be summarized as below:

⟩ Internal financing is the dominant source of financing for almost all firms.

⟩ Internal financing has the major decision of current liquidity and investment.

⟩ Large reduction in cash flow and collateral value lead to decreased investment.

⟩ Firms increase investment in response to the availability of cash flow, and

⟩ Marginal risk aversion may contribute to the correlation between firm investment and financial status.

2.04 Research gap

The earlier studies done by different scholars and researchers have showed the analysis of cash flow and investment decision, financial status and financial constraint for investment but limited studies have been found in the field of internal finance and firm investment. However, in this area, Hubbard, R. et, al; 1995, conducted the study including 428 samples. They concluded that the firm level investment in the presence of capital market imperfections was important in affecting investment decision. There is no paper which verify directly whether higher investment-cash flow sensitivity is related to financing problems and, if it is, in what way. In particular, there was no test of the fundamental assumption investment-cash flow sensitivities increase monotonically with the degree of financing constraints. This is surprising because there is no strong theoretical reason to expect a monotonic relationship. FHP,(1988) investigated the relation between investment- cash flow sensitivities and financing constraints by undertaking in-depth analysis of a sample of firms exhibiting an unusually high sensitivity of investment to cash flow (FHP, 1988). The growth rate of investment relates to current and lagged values of proportionate changes in q. An important source of variation in the numerator of q-the market value of capital is the change in stock market prices.

In addition, Steven M. et.al ,(1993) had underestimated the impact of finance constraints on growth and investment because firms' smooth fixed investment in the short runs with

working capital . Given the magnitude and the importance of this literature, it is surprising that little attention has been given to the theoretical foundation of the investment-cash flow sensitivity criterion. It is justified that sensitivity based on the fact that external funds were more costly than internal funds for all firms as long as some transaction costs were involved (FHP1988). The composition of equity and debt and its influence on the value of the firm was much debated and also described (Modigliani and Miller, 1958).

Hence, the finding of a positive correlation between investment and cash flow did not show as evidence in favor of financing constraints. In fact, there was very little empirical works that could be used to discriminate between the free cash flow hypotheses and the financing constraints hypothesis, even though both hypotheses start from a presumption that information and incentive problems were important. (Jensen, 1986)

Though there were various empirical works accomplished in the context of developed country like USA and Canada, but their models yet to be tested in the context of Nepalese data base. What would be the findings with reference to Nepalese data base has still been a virgin area of research. There is no study examining the "Internal finance and firm investment" in Nepal till to this date. This study is therefore, directed to fulfill this gap by concentrating to internal finance and investment behavior of Nepalese Enterprises. Data has been directly collected thought the annual reports of the selected companies for five years.

This study is also concern for resolving various conflicting views an investment behavior. For example, the findings of the empirical study conducted by Fazzaer et al; (1988) are not consistent with other number of subsequent empirical studies done by Koplan and Zingles , 1977 and Clearly, 1999. Therefore the present study is direct to test some of the conflicting views on the relationship between firms' investment and internal finance from Nepalese data set of selected enterprises.

CHAPTER- III
Research Methodology

This chapter has been divided into six sections, Section 1 devoted to the research design of the study while section 2 deals with the nature and sources of data. Section 3 consists of the selection of enterprises whereas section 4 explains the method of analysis employed in the study. Similarly, limitations of the study and definition of key terms are provided in the sections 5 and 6 respectively.

3.01 Research design

As the study focus on the estimation of effect of cash flow and investment opportunities on the investment decision, the study design includes collection of secondary data collected from various selected companies. The study tests the hypothesis that there is a significant effect of cash flow on investment decision. Similarly another hypothesis relates with investment opportunities proxied by the ratio of market value per share and book value per share. Therefore, the study is explanatory design in nature. Moreover, the study also analyzes various phenomena relating to financial status showed by various ratios. Their trend analysis in relation to each other factor is also sufficient explained. In this context, the study also includes descriptive and analytical research design.

The study is based on the secondary data which is collected from various sources. Because of poor data base the variation across the sectors and then the study felt problem in analysis. Nevertheless, the attempt has done to test the hypothesis with the use of regression analysis. In regression analysis, the investment decision proxied by the ratio of investment and capital as dependent variable and ratio of cash flow and capital, ratio of market price per share and book value per share and the ratio of dividend per share and earning per share as independent variable. In this context, both time series and cross sectional data have been used to explain the phenomena.

3.02 Nature and sources of data

This study is based on secondary data only. The necessary data and information were collected from various sources. To analyze the relationships among different financial variables, this study employed pooled cross-sectional data of 33 enterprises with 198 observations for the period of 2002/2003 to 2006/2007. The required firm level data were derived from balance sheet, income statement and other financial statements of the selected enterprises collected from the library of Securities Board of Nepal (SEBON), Thapathali. The balance sheet gives information on fixed assets, total assets, current liabilities, short term loan, long term debt, total debt, net worth and other related variables. The income statement provides information on net sales, net income, cash flow, interest expenses, and amount of depreciation, dividends and other related variables. And other financial statements provide market price of share, total capitalization, book value of share etc. Then various ratios and variables are computed as required for the study. The major sources of data and information were as follows:

- Website of NEPSE Ltd.: http://www.nepalstock.com
- Website of various selected enterprises
- Website of Nepal Rastra Bank : http://www.nrb.org.np
- www.investors.com, www.hbswk.hbs.edu ,www.forbes.com , (A research material study website, USA)
- Annual Report 2006, NEPSE Ltd.
- Annual Report FY 2002/03 to 2006/2007, SEBO/N.
- Trading Report F.Y. 2002-03 to 2006/07, SEBO/N
- Various Books, Research Studies, Dissertations and Articles related to the subject.

3.03 Sample size and selection of enterprises:

There are 148 companies listed in the Securities Board of Nepal at the end of the fiscal year 2006/07, out of them 33 companies are selected for the present study. The determination of sample size and sample allocation to various sectors are described below.

The population of the study is the listed companies in stock market is 148 companies till 2065/01/28 B.S .To determine the represented sample size the cash flow is as a measure. The cross sectional data is used to determine the standard deviation of the cash flow .After the process, the following formula is used to determine the sample size. The formula

is: $n \, \text{X} \dfrac{Z_{\frac{r}{2}}^{2} * †^{2}}{u^{2}}$.

Where,   n = Number of sample

$Z_{/2}$ = Confidence level at 95 %

^{2} = Variance or square of standard deviation

^{2} =   error margin at 5 %.

From the used of formula, the estimated sample size is 33 from different seven enterprises. According to the sample size, sample is allocated on the basis of dues weight of seven different enterprises which is as follows.

Table: 3.1

List of listed companies and sample size

S.N.	Name of the Company	Number	Weight	Sample
1	Commercial Banks	15	0.11	4
2	Finance Companies	56	0.38	13
3	Hotel	04	0.03	1
4	Manufacturing and Processing	28	0.19	5
5	Insurance	16	0.11	4
6	Development Banks	24	0.16	5
7	Others	02	0.02	1
	Total	148	1.00	33

Source: www.nepalstock.com

When selected number of samples from the weighted then performed the lucky drawn to select exact company for study.

Table 3.2

Number of observation selected for the study

S.N.	Name of Enterprises	Code	Years	Observation
A	**Commercial Bank Sectors**			
1	Nepal Investment Bank Ltd	NIBL	2002/03 to 2006/07	5
2	Standard Chartered Bank Ltd	SCBL	2002/03 to 2006/07	5
3	Bank of kathmandu	BOK	2002/03 to 2006/07	5
4	Nepal Ind. & Commercial Bank Ltd	NICBL	2002/03 to 2006/07	5
	Total observation			20
B	**Finance Companies**			
1	NIDC Capital Markets	NIDC	2002/03 to 2006/07	5
2	Nepal Share Markets Ltd	NSM	2002/03 to 2006/07	5
3	Annapurna Fin. Co. Ltd	AFCL	2002/03 to 2006/07	5
4	Nepal Merchant Bank and Fin. Co.	NMBFC	2002/03 to 2006/07	5
5	Siddhartha Finance Limited	SFL	2002/03 to 2006/07	5
6	United Finance Ltd	UFL	2002/03 to 2006/07	5
7	People's Finance Ltd	PFL	2002/03 to 2006/07	5
8	Citizen investment trust Ltd	CITL	2002/03 to 2006/07	5
9	Universal Finance Ltd	UnFL	2002/03 to 2006/07	5
10	Gorkha Fin.Co. Ltd	GFCL	2002/03 to 2006/07	5
11	Nepal Housing & Mer. Fin. Ltd.	NHMFL	2002/03 to 2006/07	5
12	Lalitpur Finance Co. Ltd	LFCl	2002/03 to 2006/07	5
13	Paschimanchal Fin. Co. Ltd	PFCL	2002/03 to 2006/07	5
	Total observation			65
C	**Hotel**			
1	Soaltee Hotel Ltd	SHL	2002/03 to 2006/07	5
	Total observation			5
D	Manufacturing and Processing			5
1	Bottlers Nepal Ltd.(Balaju)	BNL(B)	2002/03 to 2006/07	5
2	Nepal Vanaspati Ghee Udyog Ltd	NVGUL	2002/03 to 2006/07	5
3	Gorkhali Rubber Udyog Ltd	GRUL	2002/03 to 2006/07	5
4	Khadya Udjog Ltd	KUL	2002/03 to 2006/07	5
5	Jyoti Spinning Mills Ltd (ord)	JSML	2002/03 to 2006/07	5
	Total observation			25
E	**Insurance**			
1	Nepal Life Insurance co. Ltd	NLICL	2002/03 to 2006/07	5
2	Himalayan General Ins.Co. Ltd	HGICL	2002/03 to 2006/07	5
3	Neco Insurance Co. Ltd	NICL	2002/03 to 2006/07	5
4	Life Insurance cor. Nepal	LICL	2002/03 to 2006/07	5
	Total observation			20
F	**Development Bank**			
1	Chimek Bikash Bank Ltd	CBBL	2002/03 to 2006/07	5
2	Development Credit Bank Ltd	DCBL	2002/03 to 2006/07	5
3	Nirdhan Uthan bank Ltd	NUBL	2002/03 to 2006/07	5
4	Nepal Dev. Bank Ltd	NDBL	2002/03 to 2006/07	5
5	PaschimAnchal Bikas Bank Ltd	PBBL	2002/03 to 2006/07	5
	Total observation			25
G	**Others**			
1	Nepal Film Dev. Co. Ltd	NFDCL	2002/03 to 2006/07	5
	Total observation			5
	Grand Total observation (A+B+C+D+E+F+G)			**165**

Source: www.nepalstock.com

Table 3.2 shows that there are 165 observations selected for the study out of 165 population observations (33 enterprises multiply by 5 years). Therefore, the percentage of selected observations is n/N = 165/165 = 100 percent. Thus, this study is based on pooled cross-section and time series analysis of 165 observations for analyzing the relationship between internal finance and firms' investment of Nepalese enterprises. The independent variable DPS/EPS is drawn due to its zero value in the some years. More data could not be obtained as NEPSE Ltd. does not have financial statements of all listed enterprises from the year of listing. Data could also not be obtained on contacting the individual enterprises as they treated them confidential.

3.04 Variables in the model and their relationship:

As discuss in the review chapter the model includes investment in fixed assets (IFA) as dependent and cash flow (CF), the ratio of market value per share and book value per share (M/B) and ratio of dividend per share and earning per share (D/E) and lagged dependent variable (IFA_{t-1}) as independent variables:

Cash flow: Cash flow is a sum of net profit plus depreciation like in other studies, the investment in fixed assets has also been argued to have positive relationship with cash flow. Generally, management looks at internal fund for financing their investment . This is an easy source of financing. However, this is not a good practice from shareholder point of view. If internal source is not available, then the management goes other external fund. Therefore, it can be softy argued that there is a positive relationship between investment in fixed assets and cash flow. It means it is hypothesized that there is a significant impact of cash flow on the investment of fixed assets.

Ratio of market value per share and book value per share (M/B): The ratio of market value per share and book value per share is an indicator of investment opportunities. Higher the ratio entails higher investment opportunities. It is well known fact that investment can not take place without investment opportunity. Therefore, it is expected that increase in the investment opportunities proxied by M/b that increase in the

investment in fixed assets. It means it is hypothesized that there is a significant positive impact of M/B on the investment in the fixed assets.

Ratio of dividend per share and earning per share (D/E): The ratio of dividend per share and earning per share also affects investment in fixed assets. It is because higher dividend per share decrease volume of retained earning as profit distributed to share holders. This is logical that higher the D/E ratio decreases investment in the fixed assets. Therefore it is expected that there is a negative relationship between D/E and IFA.

Lagged investment in fixed assets (IFAt_1): The lagged investment in fixed assets has also been included in the model as an independent variables expecting that lagged investment in fixed assets also forces present investment in fixed assets to increase. So, lagged variable also provides long and short run elasticity.

3.05 Method of analysis

The relationship of the internal finance and firm investment is analyzed from the arithmetic average (mean) table presented in the percentage distribution. The data analysis software SPSS is run with the analyzing of time serious and regression analysis to find out the R, R^2, t value, f value and value of Durbin Watson to know the significance of the data. The models used in the study are described as bellows:

3.05.01. The econometric models

This study attempts to examine the relationship between Nepalese firms' investment and their internal finance by estimating various models. The theoretical statement of the models is that the investment in fixed assets (I_{FA}) may be regarded as subject to the constraints of market value to book value of equity (M/B) and cash flow (CF). The theoretical statement may be framed as follows:

$I_{FA} = f\ [(M/B),\ (DPS/EPS)\ ,(CF)]$……………………………………….(3.1)

The equation to be estimated has, therefore, been specified as under:

Log (IFA) $_t$ =   + $_1$Log (CF) $_t$ + $_2$ (M/B) $_t$ + $_3$ (DPS/EPS) $_t$ ……..+U_i…. ………. (3.2)

Using lagged dependent variables as independent variables, the model is rewritten as follows:

Log (IFA) $_t$ =   + $_1$Log (CF) $_t$ + $_2$ (M/B) $_t$ + $_3$ (DPS/EPS) $_t$ + $_4$ (IFA) $_{t-1}$+..+Ut…(3.3)

Where, dependent variable, IFA has been specified as the investment in fixed assets during the year.

The independent variables are specified as:

CF   = Current period cash flow to the firm as measured by net income plus depreciation during the year.

M/B   = Firm's common equity market value to book value ratio based on the previous year's actual market value at year-end.

DPS/EPS = Dividend per share to earning per share

(IFA)$_{t-1}$= The last year investment in the fixed assets

Ut   = Disturbance or error term.

3.05.02 Statistical tools used

In the process of estimating above mentioned models, various statistical tools have been used, e.g., arithmetic mean, coefficient of determination (R^2), standard error of estimate (SEE), student's t-statistics, F-statistics etc. This estimation has been done by using SPSS package.

Coefficient of determinations (R^2)

The coefficient of determination is a measure of the degree (extent or strength) of linear association or correlation between two variables, one of which happens to be dependent and other being independent variable(s). In other words, R^2 measures the percentage total variation in dependent variable explained by explanatory variables. If R^2 is equal to 0.90, which indicates that the independent variables used in regression model are supposed to explain 90 percent of the total variation in the dependent variable. The value of R^2 could

be one only if the unexplained variation is zero which simply means that all the data pointed out in the scatter diagram fall exactly on the regression line.

Regression constant (r)

It is also known as the constant which represents the distance of the fitted line directly above or below the origin (i.e., Y-intercept). The value of the constant, which is the intercept of the model, indicates the average level of dependent variable when independent variable (s) is (are) zero. In other words, it is better to understand that 'a' (constant) indicates the mean or average effect on dependent variable if all the independent variables are omitted from the model.

Regression coefficients ($_1$ $_2$ $_3$ ...)

The regression coefficient of each of the independent variables indicates the marginal relationship between that variable and value of dependent variable, holding other variables constant. In other words, the coefficients describe how changes in independent variables affect the values of dependent variable. It is also known as the slope of the line which represents the change in the value of the dependent variable for a unit change in the value of the independent variable.

Standard error of estimate (SEE)

Standard error of estimate is a measure of reliability of the estimating equation, indicating the variability of the observed points around the regression line, i.e., the extent to which observed values differ from their predicted values on the regression line. The smaller the value of SEE, the closer will be the dots to the regression line and the better the estimates based on the equation for this line. If SEE is zero, then there is no variation about the line and the correlation will be perfect. Thus, with the help of SEE, it is possible to ascertain how good and representative the regression line. Regression is a description of the average relationship between two series.

Student's t-statistics

To test the hypothesis of the study, t-test is used. For applying t-test, the t value is calculated first and compared with the critical value of 't' at a certain level of significance for a given degree of freedom. If the calculated value of't' exceeds the table value (say to.05), it is inferred that the difference is significant at 5 percent level of significance but if 't' value is less than the corresponding critical value of the 't' distribution, the difference is not treated as significant.

F-Test

The Fisher's F-distribution is defined as a distribution of the ratio of two independent chi-square variables each divided by the corresponding degrees of freedom. F-distribution has a single mode. The shape of F-distribution depends on the value of degrees of freedom; and the value of F lies between 0 to ∞ (zero to infinity). The F-test is based on F-distribution. F-test, i.e., the technique of analysis of variance enables to test the relationship of dependent and independent variables. If F is significant it shows the presence of relationship between dependent and independent variables.

3.06 Definition of key terms

The financial statements published of NEPSE Ltd. have its own format for publishing the financial data of Nepalese enterprises on a more or less uniform basis. It is, therefore, desirable to define some key terms so as to avoid misunderstanding.

Firm Investment: Firm investment refers to increase in current assets, fixed assets, and total assets of individual enterprises during the year but decrease in these assets is assumed as zero investment.

Internal financing: Cash flow, net income and depreciation are considered as internal financial variables.

Cash flow: cash flow is defined as the year-end net profit plus depreciation

*Net income***:** It is defined as net interest and non interest income minus net interest and non interest expenses at the end of the fiscal year.

Market value: Market value is defined as the average trading price at the end of the year.

Dividend per share: Dividend per share is the defined as the payout value per share after annual general meeting decision at the end of the year.

Earning per share: Earning per share is defined as net profit after interest and tax divided by the outstanding number of share.

Growth in Fixed Assets: Total amount of gross fixed assets of current year minus total amount of gross fixed assets of previous year divided by the total amount of net fixed assets of previous year is assumed as growth in fixed assets.

Total Capitalization: Total capitalization is specified as long-term loan plus net worth. It is also known as capital employed.

Net Worth: It is also known as shareholders' equity. Equity consists of the amount of equity capital, reserves and surpluses or deficiencies.

CHAPTER-IV
Factor Affecting Investment Decision

Following research objectives and methodology this chapter is devoted to analyze the data collected from sample enterprises. The scenario of the enterprises is presented under different variables such as IFA/K, CF/K, DPS/EPS and MPS/BVPS included in the model

4.01 Investment in fixed assets (IFA): Investment in the fixed assets is the economic activity of committing a set of resource with the expectation of receiving a stream of benefit in the future. In current managerial practice, if the time horizon over which benefits accrue is longer than one year then the resources committed are called investment and also termed as capital expenditure.

Investment in fixed assets indicates that the rupees amount investment in the fixed assets during the fiscal year from the cash inflow. It is decided by the board meeting of the concerned company. Generally, higher amount investment in fixed assets is the positive sign of company as it increases productive capacity of companies. It is long term investment which also increases the prestige of companies. It also helps increasing the market value of share. The volume of investment of selected 33 companies is given in Annex-1. Based on the Annex-1 the aggregate investment of the enterprises under various sectors is given below:

Table 4.1: Trend analysis of investment in fixed assets of selected enterprises of various sectors

(Rs. in 000)

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	43835	33518	31377	40811	182251	66358
B	Finance Companies	13	6632	2330	4631	4535	5634	4752.4
C	Hotel	1	678	18448	5569	29162	39715	18714
D	Manufacturing and processing	5	9705	6924	11202	15468	21800	13020
E	Insurance	4	3041	21956	11732	4407	3504	8928
F	Development Bank	5	20563	21798	13325	5515	13301	14900
G	Others	1	19667	5475	323	392	1080	5387.4
	Total	33	104121	110449	78159	100290	267285	132061

Source: Compiled from the financial statement of selected enterprises as given in annex-1

Table 4.2: **Percentage distribution of investment in fixed assets by selected enterprises of various sectors**

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	42.1	30.3	40.1	40.7	68.2	44.3
B	Finance Companies	13	6.4	2.1	5.9	4.5	2.1	4.2
C	Hotel	1	0.7	16.7	7.1	29.1	14.9	13.7
D	Manufacturing and Processing	5	9.3	6.3	14.3	15.4	8.2	10.7
E	Insurance	4	2.9	19.9	15.0	4.4	1.3	8.7
F	Development Bank	5	19.7	19.7	17.0	5.5	5.0	13.4
G	Others	1	18.9	5.0	0.4	0.4	0.4	5.0
	Total	**33**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annex-1

The table given above shows that out of the total investment in fixed assets commercial banking sector occupies a largest share of all. Its share ranges from 30.3 % to 68.2 % of the total investment of all enterprises. However percentage share is found fluctuating. Similarly, hotel enterprises show second position in investment. It contributes 13.7 % on an average. However, its share is also fluctuating ranging from 0.7 in 2002/03 to 29.1 % in 2005/06. The third position is occupied by development bank sector. On an average it comes 13.4% of total investment. The sectors like manufacturing and insurance also contribute higher share as they are followed fourth and fifth position. However their share is also fluctuating over the year.

It can be shown in trend line as bellows:

Figure 1: Sectorwise Investmentment in Fixed Assets
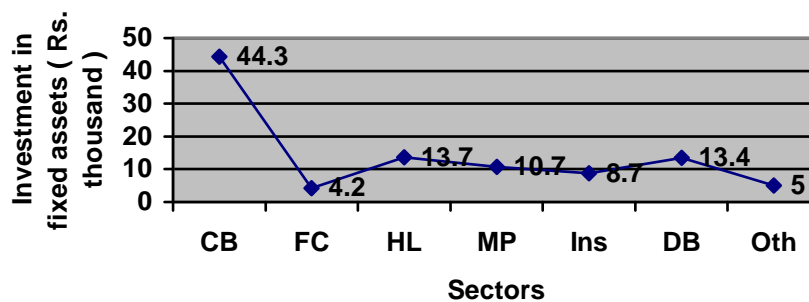
The above figure shows the trends of investment in fixed assets of the selected different sectors. It can be concluded that commercial bank sectors has the highest investment in fixed assets.

4.02 Fixed assets: It refers to investment in fixed capital, i.e. tangible capital goods (real means of production), or to the replacement of depreciated capital goods. Thus, fixed assets are physical assets such as machinery, land, buildings, installations, vehicles, or technology. Normally, a company balance sheet states both the amount of expenditure on fixed assets during the quarter or year, and the total value of the stock of fixed assets owned. The use of the term "fixed" refers in "staying in one place", but to the circulation of flows of capital.

Fixed assets indicate that the rupees amount of tangible capital goods during the fiscal year. Generally, the higher amount of fixed assets is called sound in the capital, which helps to increase the market value of share. The volume of fixed assets of selected 33 companies is given in annex 2. Based on the annex 2 the aggregate fixed assets of various sector is given below.

Table 4.3: Trends analysis of fixed assets by sectors

(Rs. In 000)

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Banks	4	339893	148840	136683	128233	131671	177064
B	Finance Companies	13	28871	15464	18441	20911	16816	20101
C	Hotel	1	44780	45060	8799	8199	391	21446
D	Manufacturing and Processing	5	179290	245291	264636	183640	290541	232680
E	Insurance	4	28691	38657	37382	28048	8674	28290
F	Development Banks	5	25680	39777	15205	12494	35170	25665
G	Others	1	60966	65794	65403	73349	68078	66718
	Total	**33**	**708171**	**598883**	**546549**	**454874**	**551341**	**571964**

Source: Annex-2

Table 4.4: Percentage distribution of fixed assets by sector

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	**Commercial Banks**	4	48.0	24.9	25.0	28.2	23.9	30.0
B	**Finance Companies**	13	4.1	2.6	3.4	4.6	3.1	3.5
C	**Hotel**	1	6.3	7.5	1.6	1.8	0.1	3.5
D	**Manufacturing and Processing**	5	25.3	41.0	48.4	40.4	52.7	41.6
E	**Insurance**	4	4.1	6.5	6.8	6.2	1.6	5.0
F	**Development Banks**	5	3.6	6.6	2.8	2.7	6.4	4.4
G	**Others**	1	8.6	11.0	12.0	16.1	12.3	12.0
	Total	**33**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annex-2

The table given above shows that out of the total fixed assets, manufacturing and processing sector occupies a largest share capital of all . Its share ranges from 23.3 % to 52.7 % of total. However percentage share is found fluctuating. Similarly, commercial bank sectors show second position in fixed assets. It contributes 30% on an average. However, its share is fluctuating ranging from 28.9% in 2005/06 to 48 % in 2006/07. The third position is occupied by other sector on an average as it comes 12% of total fixed assets. The sectors like insurance, development bank sectors also contribute higher share as they are followed fourth   and fifth position. Finance companies, hotel   has equal contribution share in total fixed assets during the year. However their share is also fluctuating over the year.

It can be shown in trend line as below:

Figure no. 2   Sectorwise fixed assets
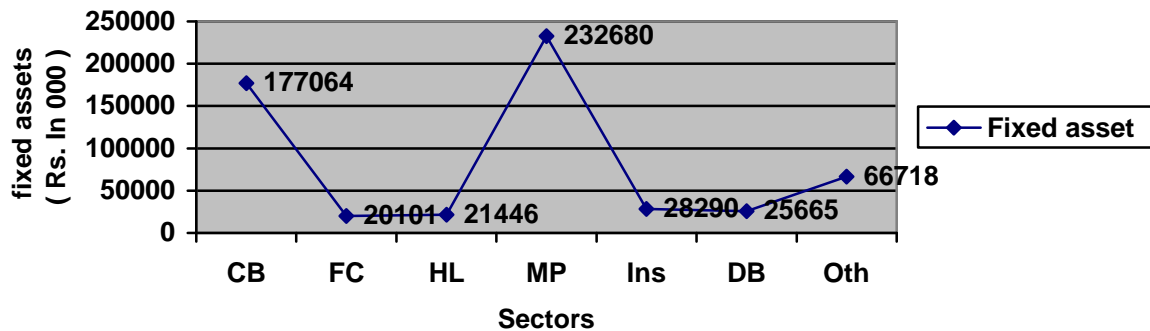
The above figure no. 2 shows the trends of fixed assets of the selected different sectors. It can be concluded that Manufacturing and processing sector has the highest fixed assets.

4.03. Dividend per share: Dividend per share (DPS) is the payment made by a corporation to its shareholder members on the basis of number of share holds. When a corporation earns a profit or surplus, that fund can be used in two different purposes: it can be either re-invested in the business (called retained earnings), or it can be paid to the shareholders as a dividend. Dividend per share is the ratio of dividend and the number of share.

It indicates that the return to share holders. It shows as measures the dividend distribution to each equity shareholders. Generally, higher DPS creates the positive attitude towards the companies and helps to increase the market value per share. The annex 3 shows the dividend per share of 33 selected enterprises for five years. The following table 5 shows the trend of dividend per share by sector.

Table 4.5: Trends analysis of dividend per share by sector

(Amount in Rs.)

S.N	Sectors	Samples	Fiscal Year					
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	33.8	33.8	61.9	44.6	31.5	41.1
B	Finance Companies	13	9.9	6.9	11.6	10.8	20.7	12
C	Hotel	1	0	0	0	0	0	0
D	Manufacturing	5	2	1	0	0	0	0.6
E	Insurance	4	0	0	0	5	5	2.04
F	Development Banks	5	2.1	2.1	6.3	12.1	1.9	4.9
G	Others	1	0	0	0	0	0	0
	Total	**33**	**48**	**44**	**80**	**73**	**59**	**60.6**

Source: Annex-3

Table 4.6: Percentage distribution of dividend per share by sector

S.N	Sectors	Samples	Fiscal Year					
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	70.7	77.2	77.6	61.5	53.1	68.0
B	Finance Companies	13	20.7	15.8	14.5	14.9	34.9	20.2
C	Hotel	1	0.0	0.0	0.0	0.0	0.0	0.0
D	Manufacturing and Processing	5	4.2	2.3	0.0	0.0	0.0	1.3
E	Insurance	4	0.0	0.0	0.0	6.9	8.8	3.1
F	Development Bank	5	4.4	4.8	7.9	16.7	3.2	7.4
G	Others	1	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**33**	100	100	100	100	100	100

Source: Annex-3

The table given above shows that out of the total dividend per share, commercial bank sector occupies a largest share of all. Its share ranges from 53.1 % to 77.6 %. However percentage share is found fluctuating over the years. Similarly, finance company sectors show second position in providing dividend per share. It contributes 20.2% on an average. However, it shares is fluctuating ranging from 14.5% in 2004/05 to 34.9 % in 2006/07. The third position is occupied by development bank sector. On an average it comes 7.4 % of total dividend per share .The sectors like insurance, manufacturing and processing sectors also contribute higher share as they are followed fourth   and fifth position. Other and hotel sectors had no contribution in dividend per share though out the year.

It can be shown in trend line as below:

Figure no. 3: Sectorwise dividend per share
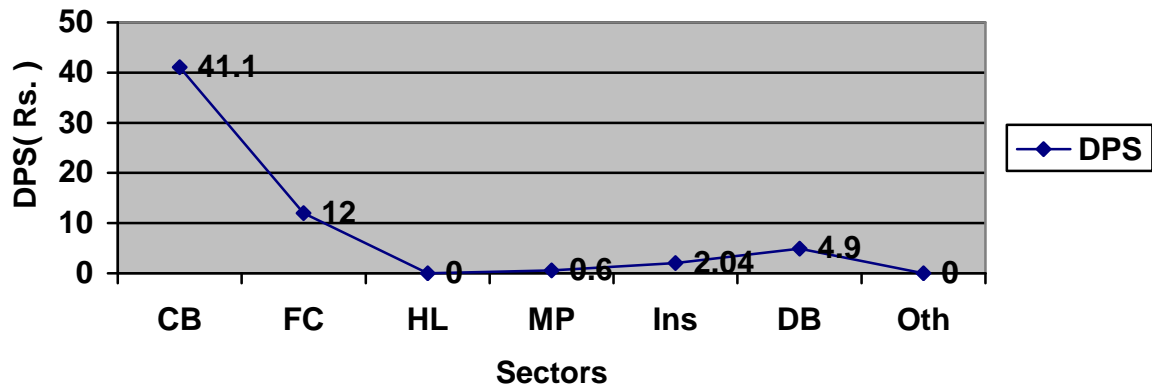
The above figure no. 3 shows the trends of dividend per share of the selected different sectors. It can be concluded that commercial bank sector has the highest dividend per share throughout the year.

4.04: Earning per share: Earnings per share (EPS) is net income divided by total common stock. Corporations usually express earning per share on a fully diluted basis

It measures the earning to each equity shareholder. Generally, higher EPS creates the positive attitudes among the investors and helps to increase the market value per share. The annex 4 shows earning per share of 33 selected enterprises from 2002/2003 to 2006/2007 (five years). Table no 7 shows the trend of earning per share by sector.

Table 4.7: Trend analysis of earning per share by sectors

<div align="right">(Amount in Rs.)</div>

S.N	Sectors	Samples	Fiscal Year 2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	52.9	59.1	58.9	73.7	74.4	63.8
B	Finance Companies	13	23.5	29.3	34.6	29	34.6	30.2
C	Hotel	1	0	0	10.61	2.13	0	2.548
D	Manufacturing and Processing	5	29.2	5.1	16.7	14.4	13.6	15.8
E	Insurance	4	10	11	12	17	13	12.22
F	Development Bank	5	7	56	38	-6	8.3	20.66
G	Others	1	0	0	2.53	0	0	0.506
	Total	**33**	**122**	**160**	**173**	**130**	**143**	**145.734**

Source: Annex-4

Table 4.8: Percentage distribution of earning per share by sector

S.N	Sectors	Samples	Fiscal Year 2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	43.3	36.9	34.0	56.8	51.9	44.6
B	Finance Companies	13	19.2	18.3	20.0	22.4	24.1	20.8
C	Hotel	1	0.0	0.0	6.1	1.6	0.0	1.6
D	Manufacturing and Processing	5	23.9	3.2	9.6	11.1	9.5	11.5
E	Insurance	4	7.9	6.6	6.9	12.7	8.7	8.6
F	Development Bank	5	5.7	35.0	21.9	-4.6	5.8	12.8
G	Others	1	0.0	0.0	1.5	0.0	0.0	0.3
	Total	**33**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annex-4

The table given above shows that out of the total earning per share, commercial bank sector occupies a largest share capital. Its share ranges from 34.0 % to 56.8 %. However percentage share is found fluctuating over the years. Similarly, finance companies sectors show second position in earning per share. It contributes 20.8 % on an average. However, it shares is fluctuating ranging from 18.3 % in 2003/04 to 24.1 % in 2006/07. The third position is occupied by development bank sector on an average it comes 12.8 % of total dividend per share .The sectors like manufacturing and processing and insurance sectors also contribute higher share as they are followed fourth   and fifth position.

It can be shown in trend line as below:

Figure no. 4: Sectorwise earning per share
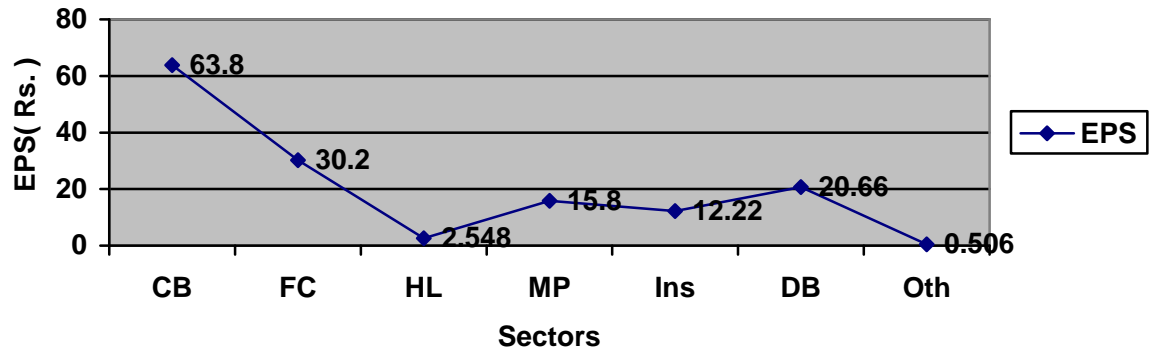
The above figure no. 4 shows the trends of earning per share of the selected different sectors. It can be concluded that commercial bank sector has the highest dividend per share throughout the year

4.05: Book value per share: Book value per share (BVPS) is the net worth of a corporation, sometimes expressed in terms of value rupees per share of common stock, after deducting the outstanding preferred share.

In other words, it is current value of assets as it appears on the balance sheet. It can be the same as market value, or it can represent the difference between the purchase price and market price less accumulated depreciation.

It measures the actual value of the stock. Generally, higher the BVPS gives the positive sign of the companies. It helps increasing the market value per share. The annex 5 shows the Book value per share of 33 firms of selected enterprises during five years periods. The table 9 shows the trend of book value per share by sector.

Table 4.9: Trend analysis of book value per share by sector

(Amount in Rs.)

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	230	257	262	241	262	250.4
B	Finance Companies	13	123	133	139	142	152	137.8
C	Hotel	1	26	26	31	18.52	21	24.504
D	Manufacturing and Processing	5	-12.1	130.3	200.4	220.6	209.8	149.8
E	Insurance	4	145	156	167	180	150	159.6
F	Development Bank	5	109	88	109	110	100	103.2
G	Others	1	0	0	100.47	0	0	20.094
	Total	**33**	**621**	**790**	**1009**	**912**	**895**	**845.4**

Source: Annex-5

Table 4.10: Percentage distribution of book value per share by sector

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	37.0	32.5	26.0	26.4	29.3	30.2
B	Finance Companies	13	19.8	16.8	13.8	15.6	17.0	16.6
C	Hotel	1	4.2	3.3	3.1	2.0	2.3	3.0
D	Manufacturing and Processing	5	-1.9	16.5	19.9	24.2	23.4	16.4
E	Insurance	4	23.4	19.7	16.6	19.7	16.8	19.2
F	Development Bank	5	17.6	11.1	10.8	12.1	11.2	12.5
G	Others	1	0.0	0.0	10.0	0.0	0.0	2.0
	Total	**33**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annex-5

The table given above shows that out of the total book value per share, commercial bank sector occupies a largest share of all. Its share ranges from Rs. 230 to Rs. 257 per share. However percentage share is found fluctuating. Similarly, insurance sector shows second position in book value per share. It contributes 19.2% on an average. However, it shares is fluctuating ranging from 16.6 % in 2004/05 to 23.4 % in 2002/03. The third position is occupied by finance company sector. On an average it comes 16.6 % of total book value per share. The sectors like manufacturing and processing and development bank sectors also contribute higher share as they are followed fourth   and fifth position. . However their share is also fluctuating over the year.

 It can be shown in trend line as below:

Figure no. 5: Sectorwise book value per share

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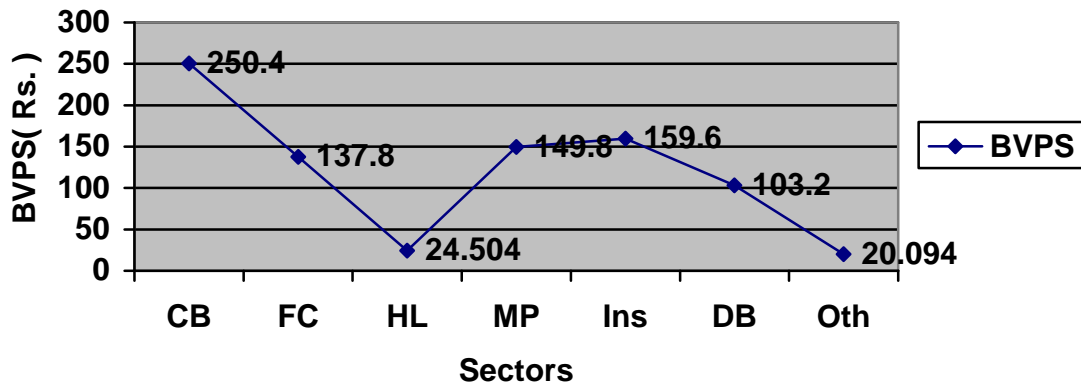
4.06 Market value per share: Market value per share (MPS) is the price at which an asset would trade in a competitive market. Market value is often used interchangeably with open market value, fair value or fair market value, although these terms have distinct definitions in different standards, and may differ in certain circumstances.The current quoted price at which investors buy or sell common stock or a bond at a given time, also known as "market price". In the context of securities, market value is often different from book value because the market takes into account future growth potential. Most investors who use fundamental analysis to pick stocks look at a company's market value and then determine whether or not the market value is adequate or if it's undervalued in comparison to its book value, net assets or some other measure. The annex 6 shows the market value per share of 33 firms of seven different sectors for five years.

Table 4.11: Trends analysis of market value per share by sector

(Amount in Rs.)

S.N	Sectors	Samples	Fiscal Year
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	713.3	799.5	985.3	1595.3	2488.5	1316.38
B	Finance Companies	13	181.5	176	193.2	219.7	353.7	224.82
C	Hotel	1	43	44	50	37	48	44.4
D	Manufacturing and Processing	5	252.4	163.2	205.4	219	228.4	213.68
E	Insurance	4	399	147	213	267	261	257.44
F	Development Bank	5	77	79.4	150	160.6	281	149.6
G	Others	1	**0**	**0**	**75**	**0**	**0**	**15**
	Total	**33**	**1666**	**1409**	**1872**	**2498**	**3661**	**2221.32**

Source : Annex-6

Table 4.12: Percentage distribution of market value per share by sector

S.N	Sectors	Samples	Fiscal Year
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	42.8	56.7	52.6	63.9	68.0	56.8
B	Finance Companies	13	10.9	12.5	10.3	8.8	9.7	10.4
C	Hotel	1	2.6	3.1	2.7	1.5	1.3	2.2
D	Manufacturing and Processing	5	15.2	11.6	11.0	8.8	6.2	10.5
E	Insurance	4	23.9	10.5	11.4	10.7	7.1	12.7
F	Development Bank	5	4.6	5.6	8.0	6.4	7.7	6.5
G	Others	1	0.0	0.0	4.0	0.0	0.0	0.8
	Total	**33**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annex-6

The table given above shows that out of the total market value per share, commercial bank sector occupies a largest share. Its share ranges from 42.8 % to 68 %. However percentage share is found fluctuating. Similarly, insurance sectors showed second position in marker value per share. It contributes 12.7 % on an average. However, their share is also fluctuating ranging from 7.1 % in 2006/07 to 23.9 % in 2002/03. The third position is occupied by manufacturing and processing sector on an average it comes 10.5% of total fixed assets. The sectors like finance and development bank sectors also contribute higher share as they are followed fourth and fifth position. However their share is also fluctuating over the year.

It can be shown in trend line as below:

Figure no. 6: Sectorwise market value per share
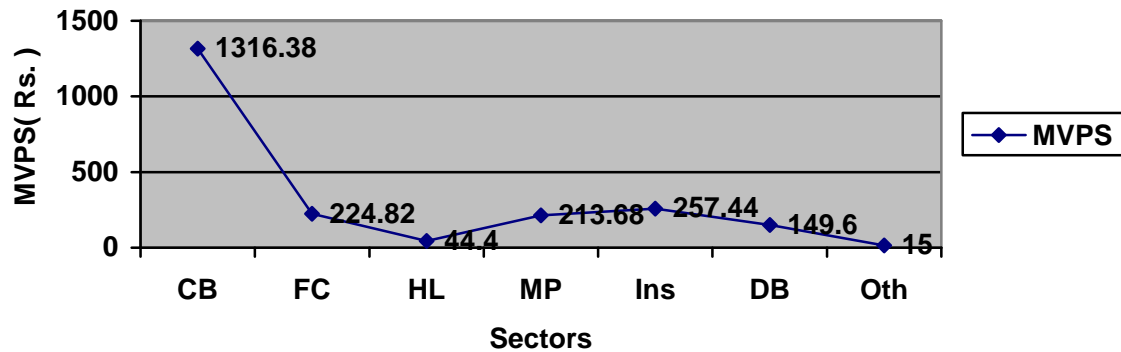
4.07 Cash flow: Cash flow denotes the cash available to an organization from its business operation and investment. A positive cash flow indicates sufficiency of net operating income to cover expenses, while a negative cash flow means expenses are growing faster than revenues. Lenders, when making loan to a business, often look first at cash from operation, before collateral, pledged by the borrower as the primary source of loan repayment. It refers to the cash position in a corporation also. Cash flow is combination of depreciation and net operating profit after taxes. The annex 7 shows the cash flow of 33 firms for five years. Based on annex 7 the aggregates cash flow of various sectors is given below:

Table 4.13: Trends analysis of cash flow by sector

(Rs. In 000)

S.N	Sectors	Samples	Fiscal Year					
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Banks	4	389649	250304	285019	347096	417026	337819
B	Finance Companies	13	12863	8758	11239	11252	20851	12992
C	Hotel	1	7076	5009	4591	7921	4451	5810
D	Manufacturing and Processing	5	71898	223624	191471	5069	-171324	64148
E	Insurance	4	48894	90377	175967	124809	157132	119436
F	Development Banks	5	42311	66349	29736	-50013	-77530	2171
G	Others	1	1863	-4950	42105	33722	35722	21692
	Total	**33**	**574553**	**639470**	**740128**	**479856**	**386327**	**564067**

Source: Annex-7

Table 4.14: Percentage distribution of cash flow by sector

S.N	Sectors	Samples	Fiscal Year					
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Banks	4	67.8	39.1	38.5	72.3	107.9	65.1
B	Finance Companies	13	2.2	1.4	1.5	2.3	5.4	2.6
C	Hotel	1	1.2	0.8	0.6	1.7	1.2	1.1
D	Manufacturing and Processing	5	12.5	35.0	25.9	1.1	-44.3	6.0
E	Insurance	4	8.5	14.1	23.8	26.0	40.7	22.6
F	Development Banks	5	7.4	10.4	4.0	-10.4	-20.1	-1.7
G	Others	1	0.3	-0.8	5.7	7.0	9.2	4.3
	Total	**33**	100	100	100	100	100	100

Source: Annex-7

The table given above shows that out of the total cash flow, commercial bank sector occupies a largest share of all. Its share ranges from 39.1 % to 107.9 %. However percentage share is found fluctuating. Similarly, insurance sectors showed second position in cash flow. It contributes 22.6 % on an average. However, their share is fluctuating ranging from 8.5 % in 2002/03 to 40.7 % in 2006/07. The third position is occupied by manufacturing and processing sector on an average it comes 6 % of total cash flow. The sectors like other and finance companies sectors also contribute higher

share as they are followed fourth   and fifth position. However their share is also fluctuating over the year.

It can be shown in trend line as below:

Figure no. 7: Sectorwise cash flow (CF)
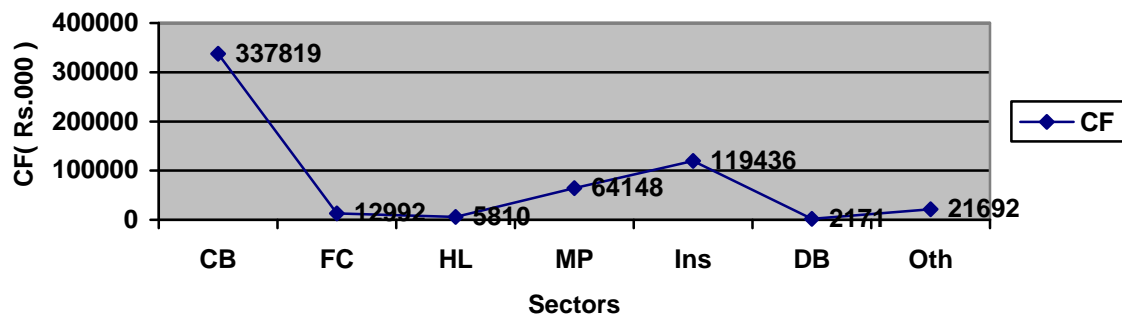
The above figure no. 7 shows the trends of cash flow of the selected different sectors. It can be concluded that commercial bank sector has the highest cash throughout the year

4.08: Investment in fixed assets to capital (IFA/K): It is the ratio of investment to capital. The capital means beginning value of the fixed assets during the year while investment should be considered as a fund generated from cash flow. Beginning value of the fixed assets during the year means the closing value of previous year. This ratio indicates the additional fixed assets during the year. The annex 8 shows the ratio of IFA/K of 33 firms for five years. Based on the annex 8 the aggregate ratio of IFA and K is given below in the table no 15.

Table 4.15: Trend analysis of IFA/K by sector

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	0.452	0.446	0.538	0.427	0.369	0.4464
B	Finance Companies	13	1.443	0.204	-0.157	1.165	1.451	0.8212
C	Hotel	1	1.58	47.18	0.679	3.314	0.881	10.7272
D	Manufacturing and Processing	5	0.233	0.027	0.062	0.193	-0.301	0.0428
E	Insurance	4	0.433	3.670	1.197	0.233	0.200	1.1466
F	Development Bank	5	1.219	1.785	1.095	0.806	3.424	1.6658
G	Others	1	0.525	0.08	0.004	0.006	0.016	0.1262

Source: Annex 8

The table given above shows the total ratio of investment in fixed assets to capital is highest in hotel sector. Its share ranges from 0.679 times to 47.18 times. However percentage share is found fluctuating. Similarly, a development bank sector shows second position. It contributes 1.1466 times on an average. However, its share is fluctuating ranging from 0.806 times in 2005/06 to 3.424 times in 2006/07. The third position is occupied by insurance sector. On an average it comes 1.1466 times of total ratio of investment in fixed assets to capital. The sectors like finance companies and commercial bank sectors also contribute higher share as they are followed fourth and fifth position. However their share is also fluctuating over the year.

4.09 Cash flow to capital (CF/ K): It is the ratio of cash flow to beginning value of fixed assets. It indicates that the cash flow of the year is how much higher or lower than the beginning capital. The following annex 9 shows the ratio of cash flow and beginning value of fixed assets of 33 firms for five years. The following table no 16 shows the trend of CF/K by sectors.

Table 4.16: Trend analysis of CF/K by sector

			Fiscal Year					
S.N	Sectors	Samples	2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	3.843	1.782	2.539	3.695	3.820	3.1358
B	Finance Companies	13	4.838	3.221	3.181	2.969	4.09	3.6598
C	Hotel	1	16.49	12.811	0.56	0.9	0.099	6.1728
D	Manufacturing and Processing	5	1.212	0.156	3.929	3.827	0.029	1.8306
E	Insurance	4	8.628	12.386	26.614	17.940	26.543	18.422
F	Development Bank	5	3.393	-27.040	5.524	-1.840	-0.310	-4.055
G	Others	1	0.050	-0.073	0.004	0.006	0.016	0.0006

Source: Annex-9

The table given above shows that out of the total ratio of cash flow to capital, insurance sector occupies a largest share of all. Its share ranges from 8.628 times to 26.614 times. However, its ratio share is found fluctuating. Similarly, hotel sector shows second position. It contributes 6.1728 times on an average. However, its share is also fluctuating ranging from 0.09 times in 2006/07 to 16.49 times in 2002/03. The third position is occupied by finance companies sector on an average it comes 3.6598 times of total ratio of cash flow to capital. The sectors like commercial bank and manufacturing and processing sectors also contribute higher share as they are followed fourth and fifth position respectively. However their share is also fluctuating over the year.

It can be shown the relationship of IFA/ K and CF/ K by the following trends line.

Figure no. 8: Sectorwise relationship of IFA/K and CF/K
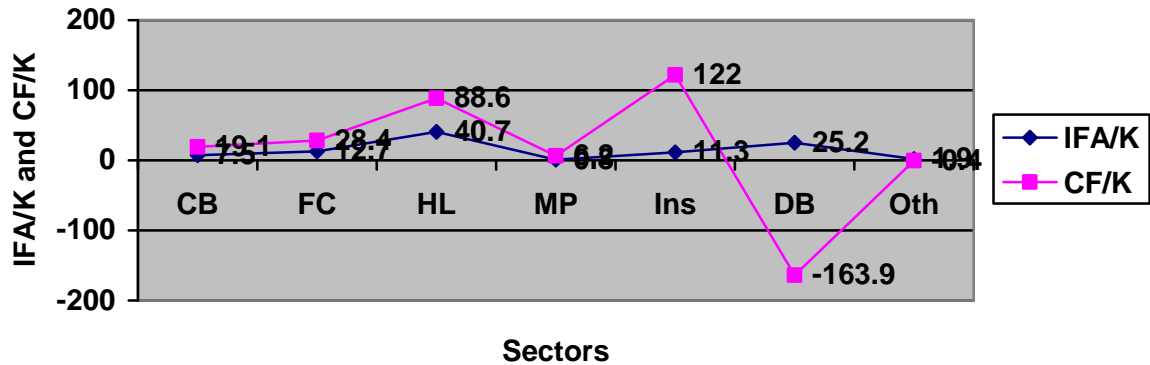
The figure 8 shows the relationship between IFA/K and CF/K of seven sectors in the same five years. In the commercial banking sector the IFA/K is less than CF/K in FY 2003/2003 where as development banking sectors has CF/K is negative but investment in fixed assets to capital is positive.

4.10 Dividend per share to earnings per share (DPS/EPS): This is the ratio of dividend per share to earnings per share. It is a payout ratio which is calculated by dividing the dividend per share by the earnings per share. A payout ratio of more than 1 means the company is paying more than it earns. Payout ratio is the ratio of dividend and operating income. The dividend payout ratio shows the portion of earning distributed to stockholders. The annex 10 shows the payout ratio of 33 firms for the five year period. Based on annex-10 the aggregates trend of DPS/EPS is presented below.

Table 4.17: Trend analysis of DPS/EPS by sector

| S.N | Sectors | Samples | Fiscal Year | | | | | |
			2002/03	2003/04	2004/05	2005/06	2006/07	Average
A	Commercial Bank	4	0.452	0.446	0.538	0.475	0.369	0.456
B	Finance Companies	13	0.618	0.312	0.376	0.378	0.543	0.4454
C	Hotel	1	0	0	0	0	0	0
D	Manufacturing and Processing	5	0.201	0.052	0	0	0	0.0506
E	Insurance	4	0.000	0.000	0.000	0.000	0.000	0
F	Development Bank	5	0.316	0.242	0.236	4.836	0.097	1.1454
G	Others	1	0.000	0	0	0	0	0

Source: Annex-10

The table given above shows that out of the total ratio of dividend per share to earnings per share, development bank sector occupies a largest share. Its share ranges from 0.097 times to 4.836 times. However ratio is found fluctuating. Similarly, commercial bank sectors showed second position. It contributes 0.456 times on an average. However, its share is also fluctuating ranging from 0.369 times in 2006/07 to 0.538 times in 2004/05. The third position is occupied by finance company sector. On an average it comes .04454 times. The sectors like manufacturing and processing also contribute higher share as they are followed fourth position. However its share is also fluctuating over the year.

4.11 Market value per share to book value per share (MPS/ BVPS) : It is the ratio of market value per share to book value per share. It is calculated by dividing the company's market value per share by the book value per share. If the ratio of MPS and BVPS is more than 1 means the company's share is trading   at higher price more than the net worth. This ratio shows the portion of market value and the book value. The annex 11 shows the ratio of MPS to BVPS of 33 firms for the five years.

Table 4.18: Trend analysis of MPS/BVPS by sector

S.N	Sectors	Samples	Fiscal Year					Average
			2002/03	2003/04	2004/05	2005/06	2006/07	
A	Commercial Bank	4	2.449	2.533	3.123	6.6	8.969	4.7348
B	Finance Companies	13	1.224	1.074	1.224	1.372	2.308	1.4404
C	Hotel	1	1.654	1.692	1.613	1.998	2.286	1.8486
D	Manufacturing and Processing	5	0.357	0.652	0.513	0.555	0	0.4154
E	Insurance	4	3.608	1.089	1.674	2.227	2.244	2.1684
F	Development Bank	5	0.992	0.341	0.482	0.982	1.678	0.895
G	Others	1	0	0	0	0	0	0

Source: Annex-11

The table given above shows that commercial bank sector occupies a largest share in this indicator. Its share ranges from 2.449 times to 8.96 times. However percentage share is found fluctuating. Similarly, insurance sector shows second position. It contributes 2.1684 times on an average. However, its share is also fluctuating ranging from 1.089 times in 2003/04 to 3.608 times in 2002/03. The third position is occupied by hotel sector. On an average it comes 1.8486 times. The sectors like development bank and finance companies also contribute higher share as they are followed fourth   and fifth position. However their share is also fluctuating over the year.

The relationship between investment to capital and dividend per share to earning per share can be shown by the trend line as below.

Relationship of IFA/K and DPS/EPS

Figure no. 9: Sectorwise relationship of IFA/K and DPS/EPS
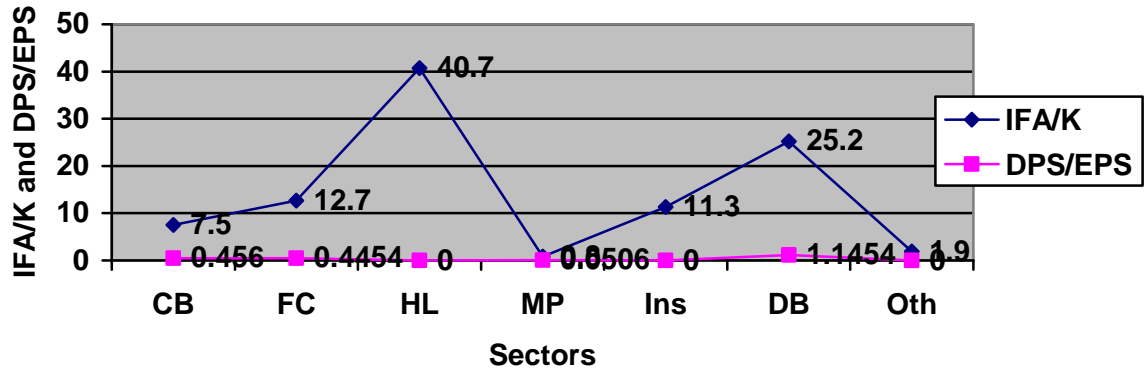
The figure 9 shows the relationship between IFA/K and DPS/EPs of seven sectors in the same five years**.** In all sectors have IFA/K is higher than DPS/EPS.

Relationship of IFA/K and MVPS/BVPS

Figure no. 10:Sectorwise relationship of IFA/K and MPS/BVPS
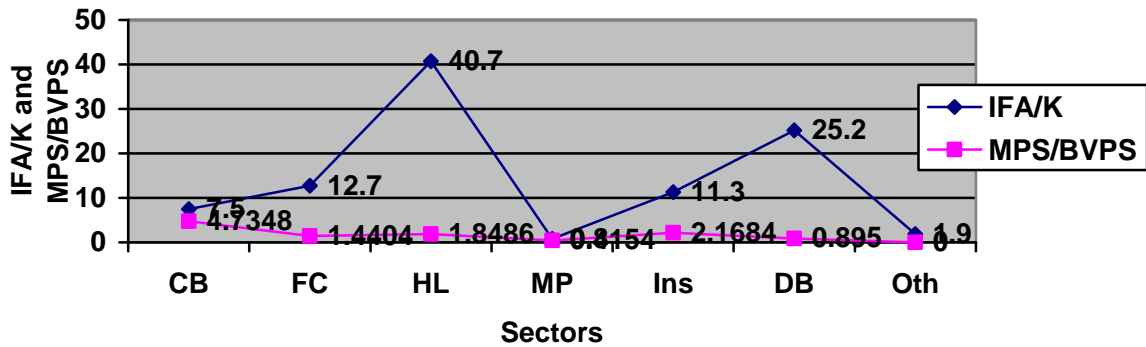
The figure 10 shows the relationship between IFA/K and MPS/BVPS of seven sectors in the same year's period for five years**.** In all sectors have the IFA/K is higher than MPS/BVPS.

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It is summarized to the dependent variables and independent variable by sectors as is below.

Table 4.19: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in commercial bank sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	0.452	3.843	0.452	2.449
2003/04	0.446	1.782	0.446	2.533
2004/05	0.538	2.539	0.538	3.123
2005/06	0.427	3.695	0.475	6.6
2006/07	0.369	3.82	0.369	8.969
Average	0.4464	3.1358	0.456	4.7348

The above table no. 19 shows the status of variable used in the study of commercial bank sector. The dependent variable IFA/K is fluctuating in the period included in the study. Independent variables CF/K and DPS/EPS are also fluctuating while the   MPS/BVPS is in increasing trend. The analysis of IFA/K in relation to CF/K, DPS/EPS does not provide any pattern rather of all them are fluctuating.

Table 4.20: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in finance company sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	1.443	4.838	0.618	1.224
2003/04	0.204	3.221	0.312	1.074
2004/05	-0.157	3.181	0.376	1.224
2005/06	1.165	2.969	0.378	1.372
2006/07	1.451	4.09	0.543	2.308
Average	0.8212	3.6598	0.4454	1.4404

The above table no. 20 shows the status of variable used in the study of finance companies sector. The dependent variable IFA/K is fluctuating in the period included in the study which lies between -0.157 to 1.451 times. Independent variables CF/K, DPS/EPS and MPS/BVPS are also fluctuating. The analysis of IFA/K in relation to CF/K, DPS/EPS does not provide any pattern rather of all them are fluctuating.

Table 4.21: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in hotel sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	1.58	16.49	0	1.654
2003/04	47.18	12.811	0	1.692
2004/05	0.679	0.56	0	1.613
2005/06	3.314	0.9	0	1.998
2006/07	0.881	0.099	0	2.286
Average	10.72	6.1728	0	1.8486

The above table no. 21 shows the status of variable used in the study of hotel sector. The dependent variable IFA/K is highly fluctuating in the period included in the study which lies between 0.881 to 47.18 times. Independent variables CF/K and MPS/BVPS are also fluctuating. The ratio of DPS to EPS has no effects as there is no value. The analysis of IFA/K in relation to CF/K, DPS/EPS and MPS/BVPS does not provide any pattern rather of all them are fluctuating.

Table 4.22: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in manufacturing and processing sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	0.233	1.212	0.201	0.357
2003/04	0.027	0.156	0.052	0.652
2004/05	0.062	3.929	0	0.513
2005/06	1.193	3.827	0	0.555
2006/07	-0.301	0.029	0	0.513
Average	0.0428	1.8306	0.0506	0.4154

The above table no. 22 shows the status of variable used in the study of manufacturing and processing. The dependent variable IFA/K is fluctuating in the period included in the study which lies between -0.301 to 1.193 times. Independent variables CF/K and MPS/BVPS are also fluctuating. The ratio of DPS to EPS of year 2004/05 to 2006/07 has no effects as there is no value. The analysis of IFA/K in relation to CF/K, and MPS/BVPS does not provide any pattern rather of all them are fluctuating.

Table 4.23: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in insurance sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	0.4333	8.628	0	3.608
2003/04	3.67	12.386	0	1.089
2004/05	1.197	26.614	0	1.674
2005/06	0.2333	17.94	0	2.227
2006/07	0.2	26.543	0	2.244
Average	1.1466	18.422	0	2.1684

The above table no. 23 shows the status of variable used in the study of insurance sector. The dependent variable IFA/K is fluctuating in the period included in the study which lies between 0.02 to 1.97 times. Independent variables CF/K and MPS/BVPS are also fluctuating. The ratio of DPS to EPS has no effects as there is no value. The analysis of IFA/K in relation to CF/K, DPS/EPS and MPS/BVPS does not provide any pattern rather of all them are fluctuating.

Table 4.24: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in development bank sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	1.219	3.393	0.316	0.992
2003/04	1.785	-27.04	0.242	0.341
2004/05	1.095	5.524	0.236	0.482
2005/06	0.806	-1.84	4.836	0.982
2006/07	3.424	-0.31	0.097	1.678
Average	1.6658	-4.055	1.1454	0.895

The above table no. 24 shows the status of variable used in the study of development bank sector. The dependent variable IFA/K is fluctuating in the period included in the study which lies between 0.806 to 3.424 times. Independent variables CF/K, DPS/EPS and MPS/BVPS are also fluctuating. The CF/ K have negative values in fiscal year 2003/04, 2005/06 and 2006/07. The analysis of IFA/K in relation to CF/K, DPS/EPS does not provide any pattern rather of all them are fluctuating.

Table 4.25: Summary of IFA/K, MPS/BVPS, DPS/EPS and CF/K in others sector

Year	IFA/K	CF/K	DPS/EPS	MPS/BVPS
2002/03	0.525	0.05	0	0.75
2003/04	0.08	-0.073	0	0.75
2004/05	0.004	0.004	0	0.75
2005/06	0.006	0.006	0	0.75
2006/07	0.016	0.016	0	0.75
Average	0.1262	0.0006	0	0.75

The above table no. 25 shows the status of variable used in the study of other sector. The dependent variable IFA/K is fluctuating in the period included in the study which lies between 0.006 to 0.525 times. Independent variables CF/K is also fluctuating where as DPS/EPS has no impact and MPS/BVPS is constant. The analysis of IFA/K in relation to CF/K, DPS/EPS does not provide any pattern rather of all them are fluctuating and constant value.

4.12 Analysis of regression result

The result is based on pooled cross- sectional and time series data for the period of 2002/03 to 2006/07. The dependent variable IFA and independent variables CF, M/B, D/E and (IFA) t_{-1} are included in the model. The regression equation and their result is presented below.

Table 4.26:   Regression Result: Log IFA as a dependent and Log CF and M/B as independent variables.

$$\text{Log (IFA)}_t = \quad + \quad {}_1 \text{ Log (CF)}_t + \quad {}_2 \text{ (M/B)}_t + \ldots\ldots\ldots + U_i\ldots \ldots(4.1)$$

$$2.064* \quad 0.294 \log (CF)* \quad 0.117 (M/B)*$$

$$t= \quad (5.564) \quad (3.465) \quad (3.198)$$

$$R^2 = 0.471 \qquad \bar{R}^2 = 0.222 \qquad SEE = 0.68$$

$$DW = 1.194 \qquad DF = 129 \qquad N = 132 \qquad F_{(3,129)} = 57.32$$

Where, IFA, CF, and M/B, D/E and (IFA) t_{-1} are investment in fixed assets, cash flow, market value per share to book value per share, dividend per share to earning per share and investment in fixed assets in previous year respectively

Note: Figures in parentheses are t- values.
        *Significant at 0.1 level

The value of DW shows the presence of autocorrelation as it is 1.19 which is very far from 2 . Therefore the model was improved using Cochrane- Orcutt iteration procedure.

Table no 4.27: Regression result with improvement: Log IFA as a dependent and Log CF and M/B as independent variables.

$$Log\ (IFA)_t \quad + \quad {}_1 Log\ (CF)_t \quad + \quad {}_2 (M/B)t +....+U_i...............(4.2)$$

	2.112 *	0.283 log(CF) *	0.115 (M/B) *
t=	(5.69)	(3.384)	(3.84)

$R^2 = 0.46$	$\overline{R}^2 = 0.213$	SEE = 0.685	
DW=1.195	DF =128	N =132	$F_{(3,129)}= 55.02$

Note: Figures in parentheses are t- values
          * Significant at 0.01 level

The above table no 4.27 shows positive relationship between dependent and independent variables as it was expected. The coefficient of log CF i.e. $_1 = 0.283$, which is significant at 0.1 level. It means the regression result shows significant impact of log CF on log IFA as its computed t value at 1 % confidence level for degree of freedom 129 is (3.384) greater than tabulated 2.596 value. Therefore, it can be simply said that 1% increase in cash flow will lead to 0.283% in the investment in fixed assets. Likewise the coefficient value of $_2$ of M/B is also positive; it means that the 1 unit ratio change in investment opportunities will increase by 0.11 unit ratio in investment in fixed assets. This result is also significant due to higher calculated t- value as compared to tabulated values (i.e. 3.84> 2.596) at 1 % confidence level. The sign of cash flow and investment opportunities is also positive as per priory.

The explanatory power of the regression model R^2 is 0.46 which indicates that 46% variation of dependent variables can be explained by the independent variables included in the model. This co-efficient of determination shows goodness of fit.

Table 4.28: Regression result: Log IFA as a dependent and Log CF, M/B and $(I_{FA})_{t-1}$ as independent variables.

$$Log\ (IFA)_t \quad + \quad {}_1 Log\ (CF)t \quad + {}_2 (M/B)_t \quad + \quad {}_3 (I_{FA})_{t-1}+..+U_i.....(4.3)$$

	2.3*	0.197 log(CF) **	0.89(M/B) *	1.33(I_{FA})_{t-1}*
t=	(6.80)	(2.45)	(3.207)	(4.80)

$R^2 = 0.578$	$\overline{R}^2 = 0.21$	SEE=0.63	
DW=1.52	DF=128	N= 132	$F_{(4,128)}= 87.841$

Note: Figures in parentheses are t- values
     * Significant at 0.1 level
      ** Significant at 0.05 level

The above table shows the regression result of IFA as the dependent variables and CF and M/B and $(I_{FA})_{t-1}$ as independent variables with the inclusion of lag variable of dependent variable in the independent variable the model fit well. The co-efficient of all the variable except cash flow are significant at 0.1 level. The coefficient of log CF i.e. $_1$ = 0.197 means the 1 % change in cash flow that will increase 0.197 % in the investment in fixed assets other variables keeping constant. The regression result shows significant impact of lag CF on lag IFA as its computed t value at 5 % level for 129 degree of freedom is 2.45 greater than tabulated 2.326 values. Likewise the coefficient value of M/B is also positive; it means that the 1 % change in investment opportunities will increase by 0.89% in the investment in fixed assets. This result is also significant because calculated t- value is higher than tabulated values (i.e. 3.027 > 2.596) at 1 % level of significance. Likewise the co-efficient of $(I_{FA})_{t-1}$ is also positive. It means 1 percent increase in fixed assets will impact by 1.5% of previous year investment.

The explanatory power of the regression model R^2 is 0.47 that indicates the 47% variation of dependent variables can be explained by the independent variables. It shows fit well.

Table no. 4.29: Regression result: Log IFA as a dependent and Log CF, and $(I_{FA})_{t-1}$ as independent variables.

$$Log(IFA)_t \quad\quad + \quad {}_1Log\ (CF)_t \quad\quad + {}_2\ (I_{FA})_{t-1} + \ldots\ldots\ldots + U_i \ldots\ldots\ldots(4.4)$$

	2.29*	0.248(log CF) *	1.50$(I_{FA})_{t-1}$*
t=	(6.399)	(3.044)	(5.329)

$R^2 = 0.531$	$\overline{R}^2 = 0.31$	SEE=0.655	$F_{(3,129)}=64.876$
DW=1.586	DF=129	N= 132	

Note: Figures in parentheses are t- values
* Significant at 0.01 level

The above table shows the regression result of IFA by dropping the variable M/B. The sign of all the co- efficient is positive indicating that increase in the value of one variable will also increase of other variables The coefficient of log CF i.e. $_1$ = 0.248 means the 1 % change in cash flow that will 0.248 % change in the investment in fixed assets. The regression result shows significant impact of log CF on log IFA as its computed t value at 1 % level for 129 degree of freedom is 3.044 which is greater than tabulated 2.596 value. Likewise the coefficient value $(I_{FA})_{t-1}$ is also positive; it means that the 1 % change in the previous year investment in fixed assets will increase 1.5% in current year investment. This result is also significant due to higher calculate t- value is higher than tabulated values (i.e. 5.329 > 2.596) at 1 % level.

The explanatory power of the regression model $R^2 = 0.53$ indicates that 53% variation of dependent variables can be explained by the independent variables. It relates with cross-sectional process with Cochrane- Orcutt method, therefore it is accepted.

Because of presence of zero value of D/E, of the years the regression model includes only 69 observations. The regression result is given below.

Table No. 4.30: Regression result: Log IFA as dependent and Log CF, M/B, D/E and $(I_{FA})_{t-1}$ as Independent variables

$$\text{Log (IFA)}_t = \quad + {}_1 \text{Log (CF)}_t + {}_2(\text{M/B})_t + {}_3(\text{D/E})_t + {}_4(\text{IFA})_{t-1} + .. + U_i \quad ..(4.5)$$

	3.156*	0.27log (CF) *	0.15(M/B) *	-0.002(D/E)	0.043 $(I_{FA})_{t-1}$***
t =	(11.396)	(3.187)	(4.788)	(-0.098)	(1.29)

$R^2 = 0.47$ $\overline{R}^2 = 0.16$ SEE=0.456 $F_{(3,129)} = 14.52$

DW=2.098 DF= 63 N =69

Note: Figures in parentheses are t- values
   *Significant at 0.01 level
   ** Significant at 0.05 level
   *** Significant at 0.1 level

The regression result excluding zero value of the variables of the years also provides positive sign of all the variables except D/E variable. The regression result shows that the log IFA as the dependent variables and CF, M/B, and $(I_{FA})_{t-1}$ as independent variables provide positive with D/E negative. The coefficient of log CF i.e. ${}_1 = 0.27$ means 1 % change in CF will increase 0.27 % in investment in fixed assets. The regression result is confirmed the positive relationship because the calculated t- value is higher than tabulated value (i.e. 3.187 > 2.576) at 1 percent level. Likewise the coefficient value of M/B is also positive; it means that the 1 % increase in the investment opportunities will increase by 0.15 % in investment in fixed assets. The co-efficient value of the D/E is negative which shows that the negative relation to the investment in the fixed assets. The $(I_{FA})_{t-1}$ is also positive indicating that 1 % increase in lagged variable of dependent variable will increase 0.043% in investment in fixed assets.

The explanatory power of the regression model R^2 is 0.47, it indicates that 47% variation of dependent variables can be explained by the independent variables. The independent variable ratio of dividend per share to earning per share doesn't satisfy the priory of the study as it comes with negative sign. However it is not significant.

CHAPTER- V
Summary, Conclusion and Future Avenues

5.01 Summary

Investment decision is one of the major functions to be performed continuously by financial manager in the normal course of business. Fixed assets are mainly assets which the business enterprises decide to invest in. The effective investment decision is essential for the success of business. While effective investment decision depend on the knowledge of factors affecting investment decision. Among several factors of firm investment, the financial cash flow together with ratio of market value per share to book value per share (M/B), the ratio of dividend per share to earning per share and lagged dependent variables are assumed with the major role in determining the investment in fixed assets. The cash flow, the ratio of market value to book value and the ratio of dividend per share to earning per share are the independent variables. The present study is directed forwards examining the factors affecting investment decision in fixed assets.

This study aims at assessing the relationship between internal finance and firm investment of Nepalese enterprises. Its specific objectives are : (i) to examine the status of selected Nepalese enterprises in terms of cash flow, liquidity position, ratio of market value to book value of equity and ratio of dividend per share to earning per share, (ii) to determine the relationship of investment decision in fixed assets with cash flow and market value to book value of equity across the Nepalese enterprises, (iii) to estimate the effects of liquidity position on the investments decision in fixed assets, and (iv) to make policy recommendation for improving investments decision on firm investment of Nepalese enterprises.

Review of various studies conducted in the area show that investment in fixed assets is positively related to cash flow. This result is consistent with Mayer's (1990) empirical research that internal financing is the dominant source of financing for all firms, which implies that investment decisions of the majority of firms are sensitive to current

liquidity. It also concurs with the results of Lamont (1997) who documents a large decrease in the capital expenditure of non-oil subsidiaries of oil conglomerates in reaction to the 1986 drop in oil prices concluding that large reductions in cash flow and collateral value lead to decreased investment, independent of changes in available investment opportunities. The result supports the free cash flow argument presented by Jensen (1986) that firms increase investment in response to the availability of cash flows. It is also consistent with the conclusion of Bernanke and Gertler (1990) that "both quantity of investment spending and its expected return be sensitive to the creditworthiness of borrowers (as reflected in their net worth propositions)". The result again seems to be consistent with the conclusions of Fazzari et al. (1988) and many subsequent studies that business fixed investment is positively related to firm liquidity. It also seems to support the findings that investment decisions of firms operating in imperfect or incomplete capital markets are sensitive to the availability of internal funds because they possess a cost advantage over external funds indicated by Greenwald et al. (1984), Myers and Majluf (1984), and Gertler (1992). Finally, the result also consistent with the conclusions of Kaplan and Zingales (1997), Cleary (1999), and Alti (2003) that investment in property, plant, and equipment is sensitive to the availability of cash flow.

Investment in fixed assets is negatively related to investment opportunities as proxied by the ratio market value to book value of equity. This result is in contradiction with the positive relationship between fixed investment spending and investment opportunities indicated by almost all earlier empirical studies conducted in the context of developed and industrialized countries including Fazzari et al. (1988), Kaplan and Zingales (1997), and Cleary (1999). Furthermore, market value to book value of equity does not play an important role in predicting investment in fixed assets as compared to other related variables.

This is perhaps the first study that measures the relationship between Nepalese firms' investment and internal finance. The study is based on secondary data. It covers a sample of 33 enterprises in banking, finance, insurance, hotels, manufacturing and processing, trading, and other sectors that are listed in Nepal Stock Exchange (NEPSE) Limited for

the 2002/03 to 2006/07 period. For the purpose of the study, the necessary data on firm investment, internal finance and other related variables were collected from balance sheets, income statements, and other financial statements as mentioned by the website of NEPSE Ltd.: http://www.nepalstock.com and directly from the annual reports of the concerned enterprises.

The study has been conducted at a portfolio level based on pooled cross-sectional data of 33 enterprises with 132 and 69 observations dropping zero value of dividend per share to earning per share. Then the linear regression equations to examine the relation of cash flow the ratio of market value per share to book value per share, ratio of dividend per share to earning per share to investment in fixed assets of enterprises were developed. The sample year started from 2002/03 to 2006/07. The specification also includes cross sectional data of 33 enterprises. The total observation included 132 observations.

To analyze the properties of portfolios formed on firm investment, the data on investment in fixed assets, other variables were collected. All the regression results were obtained via SPSS software.

5.02 Major findings

The major findings from the study of the relation of internal finance and firm investment of Nepalese enterprises are as bellows.

1. The trend analysis of variable included in the model shows fluctuation of individual enterprise not only over the period of time but also decreases across the sectors. A sample trend analysis doesn't give any pattern in these variables.

    The investment in fixed assets (dependent variable) is also fluctuating over the period not only in individual sector but also in all the sectors. Likewise the cash flow of the different sectors is also fluctuation.

    The trend of the market value per share to book value per share is also shown

fluctuation. The trend of these variables does not give any pattern for the decision. The trend of the ratio of dividend per share to earning per share is also found fluctuating. Some of the enterprises didn't provide dividend. Therefore the ratio shows zero value for the year not declaring dividend.

2. The model developed for testing the relationship between investment in fixed assets dependent and cash flow, the ratio of market value to book value per share and the ratio of dividend per share to earning per share.

3. There is positive relationship between investment in fixed assets and cash flow, the ratio of market value per share and lagged dependent variables confirm as per priory. It means that other variables holding constant increase in the cash flow forces to increase investment. Similarly, the relationship between fixed assets and M/B also poses positive relation. This is confirmed from the regression model run. It means that there is a significant impact of M/B on the investment in fixed assets.

4. The relationship between dependent variable investment in fixed assets and independent variable cash flow   is also poses positive relation. It shows that there is significant impact of the cash flow on the investment in the fixed assets. If enterprises have sufficient cash flow then the company can invest in the fixed assets where as the company cannot invest from the external fund due to the higher cost than the internal fund.

5. The relationship between the dependent variable investment in the fixed assets (IFA) and the lagged dependent variable previous investment in the fixed assets (IFA)$_{t-1}$ is showed the positive relation. It means that there is a significant impact of previous year investment in the fixed assets on the investment in the fixed assets during the year.

6. The relationship between investment in the fixed assets and the dividend per share to earning per share posses negative. It means there is not significant impact of dividend

per share to earning per share on the investment in fixed assets.

5.03 Conclusion

The study shows the existence of the relationship between firm investment and internal finance of Nepalese enterprises. On the other hand, the increase in cash flow, investment in fixed assets tends to increase. The trends of the investment in the fixed assets are not giving the pattern over the period. The ratios of investment in the fixed assets to capital, cash flow to capital, market value to book value per share and the dividend per share to earning per share is also shown fluctuation over the period. It means that there is no certainty.

The model included in the study shows that the existence of the relationship between investment opportunities i.e. market value to book value per share on the investment in the fixed assets. It means that if the trend M/B is increasing, the trend of investment in the fixed assets increasing. The relationship between lagged investment in the fixed assets and the investment in the fixed assets during the year is positive. It shows that the last year investment accumulate this year total investment.

The impact of the dividend per share to earning per share of the company on the investment in the fixed assets is negative. It means that there is not necessary to distribute payout for the investment in the fixed assets.

5.04 Future research avenues

There are several avenues for future research in the area of the relationship between firm investment and internal finance of Nepalese enterprises. One extension of the present study is to study by adding additional years and the number of companies to get greater insight into the investment behavior of Nepalese enterprises. A second direction of future research is to include other relevant variables in the models which may explain the total variation in firm investment more besides the variables used in the models, of this study. A final avenue of research is to survey the opinions of financial executives on the relationship between firm investment and internal finance of Nepalese enterprises.

BIBLIOGRAPHY

Abel, Andrew B., and Eberly, Janice C,(1994), "A Unified Model of Investment Under Uncertainty", *The American Economic Review*, Vol.84, No.5. USA: American Economic Association, pp.1369-1384.

Alti, Aydogan, (2003), "How Sensitive Is Investment to Cash Flow When Financing Is Functionless", *The Journal of Finance*, Vol.58, No.2, Haas School of Business, University of California: The American Finance Association, pp.707-722.

Altman, Edward I., (1968), "Financial Ratios, Discriminate Analysis and the Prediction of Corporate Bankruptcy*"*, *The Journal of Finance*, Vol.23, No.4, Haas School of Business, University of California: The American Finance Association, pp. 589-609.

Bernanke, Ben S., Gertler, Mark, (1990), "Financial Fragility and Economic Performance", *The Quarterly Journal of Economics*. Vol.105, Penn State University and University of California: Economic Analysis and Policy Group, USA , pp 87-114.

Bernanke, Ben, and Gertler, Mark, (1989), "Agency Cost, Net Worth, and Business Fluctuations", *The American Economic Review*, Vol. 79, No.l, Broadway, USA: American Economic Association, pp. 14-31.

Blanchard, Olivier J., and Wyplosz. Charles, (1981) *"*An Empirical Structural Model of Aggregate Demand", *The Journal of Monetary Economics*, Vol.7, No.l., Elsevier, conference series on public policy: USA, pp. 1-28.

Bond, Stephen, and Meghir, Costas, (1994), "Dynamic Investment Models and the Firm's Financial Policy", *The Review of Economic Studies*. Vol.61, No.2, USA: The Review of Economic Studies Ltd. pp. 197-222.

Nepal Rastra Bank(2007), *Banking and Financial Statistics*; No. 49, Kathmandu:

Chaudhari, Mahesh; (2005), "The Relationship Between Firm investment and Financial Status*"*, *unpublished Master of Business Studies Thesis*, submitted to Tribhuvan University, Kathmandu.

Cherian Samuel, (1999) "Internal Finance and Investment*" World Bank Policy Research Working Paper No. 1663*, Washington DC: World Bank

Chenery, Hollis B., (March 1961), "Comparative Advantage and Development Policy", *The American Economic Review*, USA: American Economic Association pp.18-51.

Cleary, Sean, (1999), "The Relationship between Finn Investment and Financial Status", *The Journal of Finance*, Vol.54, No.2, Haas School of Business, University of California: The American Finance Association, pp. 673-692.

Cottle et al., (1988) "*Security Analysis*", New York: McGraw Hill Book Company

Cummins, Jason G., et. al, (1998), "*Investment Behaviour, Observable Expectations and Internal Funds*". Working Paper, NBER (Cambridge, MA).

Devereux, Michael, and Schiantarelli, Fabio, (1989), *"Investment, Financial Factors and Cash Flow: Evidence From UK Panel Data*", NBER (Cambridge, MA). Working Paper No.3116, pp. 1-38.

Fazzari, Steven M., et. al., (1988) "*Financing Constraints and Corporate Investment",* Brookings Papers on Economic Activity, NBER Working Paper No. 2387,pp. 141-195.

Fazzari, Steven, and Athey, Michael, (1987), "Asymmetric Information, Financing Constraints and Investment*", The Review of Economics and Statistics*. Vol.69, Hayward Street, Cambridge MA : MIT Press, pp.481-487.

Franco Modigliani and Merton H. Miller, (1958), "The Cost of Capital, Corporation Finance and the Theory of Investment", *The American Economic Review*, Vol. 48, No. 3, USA: American Economic Association, pp. 261-297.

Garber, Peter M., and King, Robert G, ,(1983). "*Deep Structural Evaluation? A Critique of Euler Equation Methods"*, working paper, No.31, NBER (Cambridge. MA),

Gertler, Mark, (1992), "Financial Capacity and Output Fluctuation in an Economy with Multi-Period Financial Relationship", *The Review of Economic Studies*. Vol.59, No.3, New York: The Review of Economic Studies Ltd , pp. 455-472.

Gertner, Robert, et. al., (2002) "Learning About Internal Capital Markets from Corporate Spin-offs", *The Journal of Finance,* Vol.,57, No.6, Haas School of Business, University of California: The American Finance Association, pp 2479-2506.

Gilchrist, Simon, (1991), "An Empirical Analysis of Corporate Investment and Financing Hierarchies Using Firm-Level Panel Data", *Mimeograph*. Seaboard: Seaboard of Governors of the Federal Reserve System.

Gilchrist, Simon, and Himmelberg, Charles P., (1995), "Evidence on the Role of Cash Flow for Investment", *The Journal of Monetary Economics*, Vol.36. No.3, Elsevier: Conference series on public policy: USA pp. 541-572.

Goldress, Jerry E., and Christon, Roger W., (1976), "*Management in Crises*". The

Management Review, American Management Association, West Street. New York,

Gomes, Joao F., (December 2001), "Financing Investment", *The American Economic Review*. Vol.91, No.5, USA: American Economic Association, pp.1263-1285.

Greenwald, Bruce, et.al., (May,1984), "Informational Imperfections in the Capital Market and Macroeconomic Fluctuations". *The American Economic Review*. Vol.74, No.2, Broadway, USA: American Economic Association, pp.194-199.

Gross, David, (1995), *The Investment and Financing Decisions of Liquidity Constrained Firms*, University of Chicago,

Gupta, S.C., (1995), *Fundamentals of Statistics*, New Delhi: Himalayan Publishing House

Hampton, John J., (1990), *Financial Decision Making: Concepts. Problems and Cases,* New Delhi: Prentice Hall of India Private Limited.

Himmelberg, Charles P., (1991), *A Dynamic Analysis of Dividend and Investment Behaviour under Borrowing Constraints*, Mimeograph, New York University,

Hoover, Edward M., (1954), "Some Institutional Factors in Business Investment Decision"*, The American Economic Review,* USA: American Economic Association, pp.201-213.

Hoshi, Takeo, et.al., (February 1991), "Corporate Structure, Liquidity, and Investment: Evidence from Japanese Industrial Groups". *The Quarterly Journal of Economics*, Vol.106, No.l, Penn State University and University of California: Economic Analysis and Policy Group, USA. pp.33-60.

Hubbard, R. Glenn, (1990), "*Introduction", in Hubbard, R. Glenn ed., Asymmetric Information. Corporate Finance, and Investment"*, Chicago: University' of Chicago Press, pp.1-14.

Hubbard, R. Glenn, Kashyap, Anil K., and Whited Toni M, (1995), "Internal Finance and Firm Investment", *The Journal of Money, Credit and Banking*: Vol.27, No.3,Carmack: Ohio State University Press, 1070 Columbus, Ohio pp. 683-701.

Jaffee, Dwight M., and Russell, Thomas, (1976), "Imperfect Information, Uncertainty, and Credit Rationing", *The Quarterly Journal of Economics*, Vol.90, Penn State University and University of California: Economic Analysis and Policy Group, USA, pp. 651-666.

Jain, Premila, (1996), *Financial Management*, Jaipur: Point Publishers, India.

John Paul Broussard, et. al., (2004), "CEO Incentives, Cash Flow, and Investment"; *Financial Management*, Vol. 33, No. 2, Camden: Pilotte School of Business, pp. 51-70

Jorge A. Chan-Lau and Peter B. Clark, (1998), "Fixed Investment and Capital Flows: A Real Options Approach", *The Journal of Finance*, Haas School of Business, University of California: The American Finance Association.

Kaplan, Steven N., and Zingales, Luigi, (1997), "Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints". *The Quarterly Journal of Economics*, Vol.112, No.448, Penn State University and University of California: Economic Analysis and Policy Group, USA 169-215.

Kashyap, Anil K., Lamont, Owen A., and Stein, Jeremy C, (1994), "Credit Conditions and the Cyclical Behaviour of Inventories*", The Quarterly Journal of Economics,* Vol.109, No.3, Penn State University and University of California: Economic Analysis and Policy Group, USA 565-592.

Kerlinger, F.N., (1986), *Foundations of Behavioural Research,* New York: Holt. Rimehart and Winston,

Kuh, Edwin, (1963), *"*Theory and Institutions in the Study of Investment Behavior". *The American Economic Review*, Vol.53, No.2, Broadway, USA: American Economic Association, pp.260-268.

Lamont, Owen, (1997), "Cash Flow and Investment: Evidence from Internal Capital Markets*", The Journal of Finance*, Vol.52, No.l, Haas School of Business, University of California: The American Finance Association, pp.83-109.

Leahy, John V., and Whited, Toni M., (1996), *"*The Effect of Uncertainty on Investment: Some Stylized Facts", *The Journal of Money, Credit and Banking,* Vol.28, No.l, Carmack: Ohio State University Press, 1070 Columbus, Ohio, pp.64-83.

Leland, Hayne, and Pyle, David, (l977), *"*Informational Asymmetries, Financial Structure, and Financial Intermediation*", The Journal of Finance,* Vol.32, Haas School of Business, University of California: The American Finance Association ,pp.371-387.

Lintner, John, (1956), "Distribution of Income of Corporations among Dividends. Retained Earnings, and Taxes", *The American Economic Review*, American Economic Association, USA, pp. 97-113.

Nepal Rastra Bank (2008), *Macroeconomic Indicators of Nepal*, Kathmandu

Mayer, Colin, (1990), *"Financial Systems, Corporate Finance, and Economic Development"*, in Hubbard, R. Glenn ed., Asymmetric Information. Corporate Finance, and Investment, Chicago: University of Chicago Press.

Modigliani. Franco, and Miller, Merton H., (1958), "The Cost of Capital. Corporation Finance and the Theory of Investment", *The American Economic Review,* Vol.48, No.3, Broadway, USA: American Economic Association, 261-297.

Mote, V.L., Paul, Samuel, and Gupta, G.S., (1977), *Managerial Economics: Concept and Cases,* New Delhi: Tata McGraw-Hill Publishing Company Limited.

Myers, Stewart C, (1984), "The Capital Structure Puzzle",' *The Journal of Finance*. Vol.39, No.3, Haas School of Business, University of California: The American Finance Association, pp. 575-592.

Myers, Stewart C, and Majluf, Nicholas S., (1984), "Corporate Financing and Investment Decision When Firms Have Information That Investors Do Not Have"*, The Journal of Financial Economics*. Vol.13, No.2., Elsevier, conference series on public policy: USA, pp.187-221.

Oliner, Stephen D., and Rudebusch, Glenn D., (1992), "Sources of the Financing Hierarchy for Business Investment"*, The Review of Economics and Statistics*. Vol.74, Hayward Street, Cambridge MA : MIT Press, pp.643-654.

Pandey, I.M., (1999), *Financial Management*, New Delhi: Vikash Publishing House Pvt. Ltd. India.

Pappas, James L., Brigham, Eugene F., and Hirschey, Mark, (1979), *Managerial Economics*. Illinois: The Dryden Press.

Peyer and Shivdasani, Anil, (2001), "Leverage and Internal Capital Markets: Evidence from Leveraged Recapitalizations", *The Journal of Financial Economics.* Vol.59, No.3, Elsevier, conference series on public policy: USA pp.477-515.

Poterba, James M., and Summers, Lawrence H, (1983), "Dividend, Taxes, Corporate Investment, and q"*, The Journal of Public Economics*, Vol.22, Elsevier, conference series on public policy: USA ,pp.136-167.

Pradhan, Radhe S., (1993), *"*Stock Market Behaviour in A Small Capital Market: A Case of Nepal", *The Nepalese Management Review*, Vol.9. No. 1, Kathmandu: pp. 23-49.

Nepal Rastra Bank,(2008), *Quarterly Economic Bullitin*, Vol 42, No.2 , Kathmandu

Rajan, Raghuram, Servaes, Henri, and Zingales, Luigi, (2000), "The Cost of Diversity:

The Diversification Discount and Inefficient Investment", *The Journal of Finance,* Vol.55, No. 1, Haas School of Business, University of California: The American Finance Association, pp. 35-80.

Reiss, Peter C, (1990), *"*Economic and Financial Determinants of Oil and Gas Exploration   Activity*", Asymmetric Information, Corporate Finance, and Investment*, Chicago: University of Chicago Press, pp.181-206.

Robert E. Hall and Dale W. Jorgenson, (1967), *"*Tax Policy and Investment Behavior*; The American Economic Review*, Vol. 57, No. 3, USA: American Economic Association, pp. 391-414.

Robert J. Barro, (1989 & 1990), *"*The Stock Market and Investment*", The Review of Financial Studies*, Vol. 3, No. 1, National Bureau of Economic Research Conference: Stock Market Volatility and the Crash, Dorado Beach, pp.16-18,

Sargent, Thomas J., (1980), "Tobin's q and the Rate of Investment in General Equilibrium"*, The Carnegie-Rochester Conference Series on Economic Policy*, Vol.12, No.6, pp.107-154.

Schall, Lawrence D., and Haley, Charles W., (1979), *Introduction to Financial Management*, New Delhi: Tata McGraw-Hill Publishing Co. Ltd.

SEBO/N,(2006), *Annual Report FY 2006/07*, Kathmandu:SEBO/N,

Sharma, R.K., and Gupta, Shashi K., (1996), *Management Accounting*, Ludhiyana: Kalyam Publishers.

Shin, Hyun-Han, and Stulz, Rene M., (1998), "Are Internal Capital Markets Efficient" *The Quarterly Journal of Economics*, Vlo.113, No.453, Penn State University and University of California: Economic Analysis and Policy Group, USA. pp.531-552.

Shrestha, Manohar Krishna, (1980), *Financial Management: Theory and Practices,* Kathmandu: Curriculum Development Centre, Tribhuvan University.

Shrestha, Rajendra Prasad, (2005), "Stock Market and Economic Development: An Enquiry into the status of Nepalese case," Journal of Management Development Review, Vol 2, No. 2, Kathamndu: Society for Development and Welfare - Nepal

Stephen D. Oliner and Glenn D Rudebusch, (1992), Sources of the Financing Hierarchy for Business Investment", *The Journal of Finance,*Vol 22 No. 1, Haas School of Business, University of California: The American Finance Association .

Steven M. Fazzari et.al.,(1993), "Working Capital and Fixed Investment: New Evidence on Financing Constraints*"; The Journal Of Finance*, Volume 24, No. 3, Haas School of Business, University of California: The American Finance Association pp. 328-342 .

Steven M. Fazzari, et. al., (2000), "Investment Cash flow Sensitivities are Useful: A comment on Kaplan and Zingales", *The Quarterly Journal of Economics*, Vol 115, No.2; Penn State University and University of California: Economic Analysis and Policy Group, USA, pp. 695-705

Steven N. Kaplan and Luigi Zingales (1997), "Do investment-cash flow sensitivities provide useful measures of financing constraints?"; *The Quarterly Journal of Economics,* Vol. 112, No. 1, Penn State University and University of California: Economic Analysis and Policy Group, USA pp. 169-215.

Stiglitz, Joseph E., and Weiss, Andrew, (1981),"Credit Rationing in Markets with Imperfect Information", *The American Economic Review*. Vol.   71. No.3, USA: American Economic Association, pp.393-410.

Terry A. Marsh and Robert C. Merton, (1986), "Dividend Variability and Variance Bounds Tests for the Rationality of Stock Market Prices*", The American Economic Review,* Vol. 76, No. 3 , USA: American Economic Association, pp. 483-498

Tobin, James, (1969), *"*A General Equilibrium Approach to Monetary Theory", *The Journal of Money, Credit, and Banking*, Vol.1, No.l, Carmack: Ohio State University Press, 1070 Columbus, Ohio, pp.15-29.

Van Home, James C, (1993), *Financial Management and Policy*, New Delhi: Prentice Hall of India Pvt. Ltd.

Whited, Toni M., (September 1992), "Debt, Liquidity Constraints, and Corporate Investment: Evidence from Panel Data", *The Journal of Finance*. Vol. 47. No.4. Haas School of Business, University of California: The American Finance Association pp.1425-1460.

Whited,Toni M, Hubbard, R Glenn; Kashyap,Anil K, (Aug 1995), "Internal finance and firm investment", *Journal of Money,Credit and Banking*; Vol. 27, No.3, pg 683-701

Whited, Toni M., (2001), "Is It Inefficient Investment that Causes the Diversification Discount?," *The Journal of Finance*, Vol.56, No:5, Haas School of Business, University of California: The American Finance Association 1667-1691.

World Bank (1989), *World Economic Outlook*,

Annexes

Annex 1 : Trend of investment in fixed assets of selected enterprises

Fiscal Year (Rs. In 000)

S.N.	Name of Enterprises	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	**Commercial Bank Sectors**	**Average**	**43835**	**33518**	**31377**	**40811**	**182251**
1	Nepal Investment Bank Ltd	NIBL	170793	107613	99210	80560	473172
2	Standard Chartered Bank Ltd	SCBL	1573	9512	-1519	47539	33230
3	Bank of kathmandu	BOK	577	10017	11606	15514	210101
4	Nepal Ind. & Commercial Bank Ltd	NICBL	2395	6928	16210	19632	12499
B	**Finance Companies**	**Average**	**6632**	**2330**	**4631**	**4535**	**5634**
1	NIDC Capital Markets	NIDC	272	658	39624	6174	3109
2	Nepal Share Markets Ltd	NSM	66527	6634	8008	3802	6778
3	Annapurna Fin. Co. Ltd	AFCL	59	832	374	721	1394
4	Nepal Merchant Bank and Fin. Co.	NMBFC	189	279	-5351	1574	47908
5	Siddhartha Finance Limited	SFL	7962	2475	604	2719	2152
6	United Finance Ltd	UFL	328	426	413	5515	1214
7	People's Finance Ltd	PFL	64	906	7113	3264	674
8	Citizen investment trust Ltd	CITL	1041	697	4873	4214	3768
9	Universal Finance Ltd	UnFL	292	84	267	519	369
10	Gorkha Fin.Co. Ltd	GFCL	589	24	59	1893	1716
11	Nepal Housing & Mer. Fin. Ltd.	NHMFL	327	158	1355	24718	469
12	Lalitpur Finance Co. Ltd	LFCl	541	188	334	2474	678
13	Paschimanchal Fin. Co. Ltd	PFCL	8026	16933	2525	1373	3017
C	**Hotel**	**Average**	**678**	**18448**	**5569**	**29162**	**39715**
1	Soaltee Hotel Ltd	SHL	678	18448	5569	29162	39715
D	Manufacturing and Processing	**Average**	**9705**	**6924**	**11202**	**15468**	**21800**
1	Bottlers Nepal Ltd.(Balaju)	BNL(T)	20987	7999	32457	36433	34511
2	Nepal Vanaspati Ghee Udyog Ltd	NVGUL	16940	1405	1405	1405	2276
3	Gorkhali Rubber Udyog Ltd	GRUL	5801	7289	4020	10465	43590
4	Khadya Udjog Ltd	KUL	2188	2325	3128	1398	5200
5	Jyoti Spinning Mills Ltd (ord)	JSML	2611	15602	16406	29044	23422
E	**Insurance**	**Average**	**3041**	**21956**	**11732**	**4407**	**3504**
1	Nepal Life Insurance co. Ltd	NLICL	2267	84103	3038	1749	4624
2	Himalayan General Ins.Co. Ltd	HGICL	7577	646	36176	8873	3664
3	Neco Insurance Co. Ltd	NICL	828	1992	5715	6203	3597
4	Life Insurance cor. Nepal	LICL	1491	1082	2000	802	2132
F	**Development Bank**	**Average**	**20563**	**21798**	**13325**	**5515**	**13301**

1	Chimek Bikash Bank Ltd	CBBL	445	588	826	5946	865
2	Development Credit Bank Ltd	DCBL	91749	94314	51892	10966	25638
3	Nirdhan Uthan bank Ltd	NUBL	43	11356	13082	1787	19316
4	Nepal Dev. Bank Ltd	NDBL	8993	1979	354	8654	1721
5	PaschimAnchal Bikas Bank Ltd	PBBL	1585	755	469	223	18963
G	**Others**	**Average**	**19667**	**5475**	**323**	**392**	**1080**
1	Nepal Film Dev. Co. Ltd	NFDCL	19667	5475	323	392	1080

Source: SEBON

Annex 2 : Trend of assets of selected enterprises

(Rs. In 000)

S.N.	Name of Enterprises	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	**Commercial Bank Sectors**	**Average**	**131671**	**128233**	**136683**	**148840**	**339893**
1	Nepal Investment Bank Ltd	NIBL	191116	249787	320592	343449	759456
2	Standard Chartered Bank Ltd	SCBL	191711	136234	71413	101302	125591
3	Bank of kathmandu	BOK	93642	83625	95231	110745	320847
4	Nepal Indus. & Com.Bank Ltd	NICBL	50213	43285	59496	39864	153679
B	**Finance Companies**	**Average**	**16816**	**20911**	**18441**	**15464**	**28871**
1	NIDC Capital Markets	NIDC	4130	34483	42000	46406	46382
2	Nepal Share Markets Ltd	NSM	127162	126197	119103	11495	113573
3	Annapurna Fin. Co. Ltd	AFCL	6031	6164	5931	6032	6645
4	Nepal Merch. Bank and Fin. Co.	NMBFC	529	615	3219	3018	80176
5	Siddhartha Finance Limited	SFL	11827	13776	13304	12795	12787
6	United Finance Ltd	UFL	2925	2867	6679	12194	11324
7	People's Finance Ltd	PFL	2472	2564	2570	5453	3930
8	Citizen investment trust Ltd	CITL	2531	2418	2673	6077	6327
9	Universal Finance Ltd	UnFL	1920	1558	1448	1547	1469
10	Gorkha Fin.Co. Ltd	GFCL	2210	10139	1405	2864	3865
11	Nepal Housing & Merc. Fin. Ltd.	NHMFL	34136	32734	3210	54927	53665
12	Lalitpur Finance Co. Ltd	LFCl	3233	2676	2373	3884	3563
13	Paschimanchal Fin. Co. Ltd	PFCL	25537	41819	41746	40373	38268
C	**Hotel**	**Average**	**391**	**8199**	**8799**	**45060**	**44780**
1	Soaltee Hotel Ltd	SHL	391	8199	8799	45060	44780
D	**Manufacturing and Processing**		**290541**	**183640**	**264636**	**245291**	**179290**
1	Bottlers Nepal Ltd.(Balaju)	BNL(T)	377394	326096	409427	323573	31431
2	Nepal Vanaspati Ghee Udyog Ltd	NVGUL	36479	34882	32297	29426	27855
3	Gorkhali Rubber Udyog Ltd	GRUL	461409	43283	429494	439931	422167
4	Khadya Udjog Ltd	KUL	75675	37918	1778	-2820	3097
5	Jyoti Spinning Mills Ltd (ord)	JSML	501749	476021	450184	436345	411901
E	**Insurance**	**Average**	**8674**	**28048**	**37382**	**38657**	**28691**
1	Nepal Life Insurance co. Ltd	NLICL	5900	88447	89621	89470	91179
2	Himalayan General Ins.Co. Ltd	HGICL	12638	9840	42597	47488	4700
3	Neco Insurance Co. Ltd	NICL	9015	7446	10664	11916	12666
4	Life Insurance cor. Nepal	LICL	7141	6458	6645	5755	6220

F	Development Bank	Average	35170	12494	15205	39777	25680
1	Chimek Bikash Bank Ltd	CBBL	2252	2346	2512	8458	9323
2	Development Credit Bank Ltd	DCBL	14405	11875	12721	119968	13676
3	Nirdhan Uthan bank Ltd	NUBL	13005	29106	45181	47409	67964
4	Nepal Dev. Bank Ltd	NDBL	1659	17479	14058	21756	18604
5	PaschimAnchal Bikas Bank Ltd	PBBL	144528	1663	1552	1294	18834
G	Others	Average	68078	73349	65403	65794	60996
	Nepal Film Dev. Co. Ltd	NFDCL	68078	73349	65403	65794	60996

Source: SEBON

Annex 3: Trend of Dividend Per Share of selected enterprises

			Fiscal Year			(Rs. In 000)	
S.N.	Name of Enterprises	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	Commercial Bank Sectors	Average	33.8	33.8	61.9	44.6	31.5
1	Nepal Investment Bank Ltd	NIBL	20	15	12.58	20	5
2	Standard Chartered Bank Ltd	SCBL	110	110	120	130	80
3	Bank of kathmandu	BOK	5	10	15	18	20
4	Nepal Indu. & Com. Bank Ltd	NICBL	0	0	100	10.53	21.05
B	Finance Companies	Average	9.9	6.9	11.6	10.8	20.7
1	NIDC Capital Markets	NIDC	0	0	0	10	41
2	Nepal Share Markets Ltd	NSM	0	0	0	0	10.53
3	Annapurna Fin. Co. Ltd	AFCL	12	2.63	3	0.53	1.05
4	Nepal Merch. Bank and Fin. Co.	NMBFC	20	20	30	0	23.08
5	Siddhartha Finance Limited	SFL	15	10	1.58	10	1.28
6	United Finance Ltd	UFL	5	5	5	10	12
7	People's Finance Ltd	PFL	0	0	0	10	10
8	Citizen investment trust Ltd	CITL	14	15	15.79	68.42	52.64
9	Universal Finance Ltd	UnFL	0	0	10	0	33.09
10	Gorkha Fin.Co. Ltd	GFCL	23	6	10	1.05	1.05
11	Nepal Housing & Merc. Fin. Ltd.	NHMFL	10	10.53	15	31	24
12	Lalitpur Finance Co. Ltd	LFCl	0	0	50	0	50
13	Paschimanchal Fin. Co. Ltd	PFCL	30	20	10	0	10
C	Hotel	Average	0	0	0	0	0
1	Soaltee Hotel Ltd	SHL	0	0	0	0	0
D	Manufacturing and Processing		2	1	0	0	0
1	Bottlers Nepal Ltd.(Balaju)	BNL(T)	10	5	0	0	0
2	Nepal Vanaspati Ghee Udyog Ltd	NVGUL	0	0	0	0	0
3	Gorkhali Rubber Udyog Ltd	GRUL	0	0	0	0	0
4	Khadya Udjog Ltd	KUL	0	0	0	0	0
5	Jyoti Spinning Mills Ltd (ord)	JSML	0	0	0	0	0
E	Insurance	Average	0	0	0	5	5.2
1	Nepal Life Insurance co. Ltd	NLICL	0	0	0	20	15
2	Himalayan General Ins.Co. Ltd	HGICL	0	0	0	0	5.79
3	Neco Insurance Co. Ltd	NICL	0	0	0	0	0
4	Life Insurance cor. Nepal	LICL	0	0	0	0	0
F	Development Bank	Average	2.1	2.1	6.3	12.1	1.9

1	Chimek Bikash Bank Ltd	CBBL	0	0	10	30	0
2	Development Credit Bank Ltd	DCBL	10.56	10.53	12.63	0.63	0.63
3	Nirdhan Uthan bank Ltd	NUBL	0	0	4	30	4
4	Nepal Dev. Bank Ltd	NDBL	0	0	0	0	0
5	PaschimAnchal Bikas Bank Ltd	PBBL	0	0	5	0	5
G	**Others**	**Average**	**0**	**0**	**0**	**0**	**0**
	Nepal Film Dev. Co. Ltd	NFDCL	0	0	0	0	0

Source: SEBON

Annex 4: Trend of earning per share of selected enterprises

			Fiscal Year		
S.N.	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	**Commercial banks Sector**	**52.9**	**59.1**	**58.9**	**73.7**	**74.4**
1	NIBL	39.56	51.7	39.5	59.35	62.57
2	SCBL	149.3	143.45	143.14	175.84	167.37
3	BOK	17.72	27.5	30.1	43.67	43.5
4	NICBL	5.19	13.65	22.75	16.1	24.01
B	**Finance Companies Sector**	**23.5**	**29.3**	**34.6**	**29.0**	**34.6**
1	NIDC	10	35	14	15	49
2	NSM	-2.32	2.9	109	16.92	22
3	AFCL	67	106	47	38	22.25
4	NMBFC	30	42	32	28	37
5	SFL	28	32	17	26	24
6	UFL	1.4	5	13	21.18	35
7	PFL	8.44	3.87	14.9	17.62	9.72
8	CITL	25.09	48.93	58.58	83.85	89.36
9	UnFL	23	31	30	28	34
10	GFCL	17	14	12	28	9.51
11	NHMFL	16.33	12.49	24.2	15.86	33.69
12	LFCl	29	17	50	38	53
13	PFCL	53.18	30.16	28.25	21	31
C	**Hotel Sector**	**0**	**0**	**10.61**	**2.13**	**0**
1	SHL	0	0	10.61	2.13	0
D	**Manufacturing and Processing**	**29.2**	**5.1**	**16.7**	**14.4**	**13.6**
1	BNL(T)	9.94	19.4	13.45	19.4	12
2	NVGUL	208	0	80.3	116.89	118
3	GRUL	0	0	-14.66	-21.31	-24
4	KUL	-68	0	-13.75	-21.66	-20
5	JSML	-3.78	6.29	18.12	-21.08	-18
E	**Insurance Sector**	**9.6**	**10.6**	**11.9**	**16.5**	**12.5**
1	NLICL	0	0	4.18	18.5	17
2	HGICL	38.41	39.56	36.7	39.9	25.1
3	NICL	0	0	3	0.59	0
4	LICL	0	3	3.71	7.15	8
F	**Development Bank Sector**	**7**	**56**	**38**	**-6**	**8.3**
1	CBBL	4	15	55.67	1.28	44
2	DCBL	10.41	19.22	22.27	13.68	16.78
3	NUBL	17.34	49.38	51.1	30.57	32
4	NDBL	0.75	188.75	49.27	-101	-78.38
5	PBBL	0.51	8	13.66	27	27
G	**Others Sectors**	**0**	**0**	**2.53**	**0**	**0**
	NFDCL	0	0	2.53	0	0

Source: SEBON

Annex 5: Trend of book value per share of selected enterprises

Fiscal Year

S.N.	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	**Commercial banks Sector**	**230**	**257**	**262**	**241**	**262**
1	NIBL	217	308	276	240	234
2	SCBL	403	399	422	468	512
3	BOK	192	218	213	130	162
4	NICBL	110	103	136	128	139
B	**Finance Companies Sector**	**123**	**133**	**139**	**142**	**152**
1	NIDC	125	128	155	155	166
2	NSM	103	105	106	115	133
3	AFCL	315	467	251	195	162
4	NMBFC	151	193	194	177.98	142
5	SFL	126	119	121	132	155
6	UFL	109	109	115	126	148
7	PFL	135	124	129	128	138
8	CITL	100	100	100	226	100
9	UnFL	113	139	153	134	168
10	GFCL	112	116	118	145	130
11	NHMFL	133	145	150	155	162
12	LFCl	234	288	288	188	359
13	PFCL	158	159	172	160	177
C	**Hotel Sector**	**26**	**26**	**31**	**18.52**	**21**
1	SHL	26	26	31	18.52	21
D	**Manufacturing and Processing**	**-12**	**130**	**200**	**221**	**210**
1	BNL(T)	362	373	331.55	361	370
2	NVGUL	-874	361	361	361	305
3	GRUL	60	60	-70	80	75
4	KUL	553	380	353	331	325
5	JSML	-101	-101	27	-30	-26
E	**Insurance Sector**	**145**	**156**	**167**	**180**	**150**
1	NLICL	100	100	100	100	102
2	HGICL	194	235	272	311	219
3	NICL	185	189	196	209	180
4	LICL	100	100	100	100	100
F	**Development Bank Sector**	**109**	**88**	**109**	**110**	**100**
1	CBBL	104	114	160	257	193
2	DCBL	105	113	120	127	129
3	NUBL	130	179	183	176	180
4	NDBL	108	-75	-31	-142	-132
5	PBBL	100	108	114	130	132
G	**Others Sectors**	**100**	**100**	**100**	**100**	**100**
	NFDCL	100	100	100	100	100

Source: SEBON

Annex 6: **Trend of market value per share of selected enterprises**

S.N.	Code	2002/03	2003/04	2004/05	2005/06	2006/07
				Fiscal Year		
A	**Commercial banks Sector**	**713.3**	**799.5**	**985.3**	**1595.3**	**2488.5**
1	NIBL	795	940	800	1260	1729
2	SCBL	1640	1745	2345	3775	5900
3	BOK	198	295	430	850	1375
4	NICBL	220	218	366	496	950
B	**Finance Companies Sector**	**181.5**	**176.0**	**193.2**	**219.7**	**353.7**
1	NIDC	125	107	145	208	600
2	NSM	125	103	120	145	300
3	AFCL	425	470	445	500	500
4	NMBFC	171	175	250	279	840
5	SFL	151	120	158	158	242
6	UFL	105	115	125	154	416
7	PFL	90	104	100	137	140
8	CITL	170	165	200	265	300
9	UnFL	150	130	130	195	200
10	GFCL	102	104	108	110	180
11	NHMFL	240	230	230	210	280
12	LFCl	265	235	250	245	330
13	PFCL	240	230	250	250	270
C	**Hotel Sectors**	**43**	**44**	**50**	**37**	**48**
1	SHL	43	44	50	37	48
D	**Mnaufacturing and Processing**	**252.4**	**163.2**	**205.4**	**219**	**228.4**
1	BNL(T)	700	554	413	500	525
2	NVGUL	300	300	300	300	325
3	GRUL	50	50	50	39	38
4	KUL	231	231	231	231	230
5	JSML	31	31	33	25	24
E	**Insurance Sectors**	**398.8**	**147.3**	**213.3**	**266.5**	**261.3**
1	NLICL	1150	162	304	427	430
2	HGICL	190	175	205	189	170
3	NICL	130	112	110	90	105
4	LICL	125	140	234	360	340
F	**Development Bank Sector**	**77**	**79.4**	**150**	**160.6**	**281**
1	CBBL	115	115	115	105	242
2	DCBL	145	165	305	390	800

S.N.	Code					
3	NUBL	100	100	100	103	105
4	NDBL	140	132	88	102	153
5	PBBL	0	0	142	103	105
G	**Others Sectors**	**75**	**75**	**75**	**75**	**75**
	NFDCL	75	75	75	75	75

Source: SEBON

Annex 7: Trend of cash flow by sector of selected enterprises

Fiscal Year   (Rs. In 000)

S.N.	Code	2002/03	2003/04	2004/05	2005/06	2006/07
A	**Commercial Bank Sector**	**389648.8**	**250303.8**	**285018.5**	**347096.0**	**417025.5**
1	NIBL	128693	176074	255551	383330	501398
2	SCBL	574539	604002	605155	674774	709845
3	BOK	822482	145992	158245	224269	289405
4	NICBL	32881	75147	121123	106011	167454
B	**Finance Companies Sector**	**12862.6**	**8757.5**	**11239.3**	**11252.1**	**20850.8**
1	NIDC	15555	21424	15229	16942	47334
2	NSM	4444	7518	11044	19982	35332
3	AFCL	14071	21814	24629	35131	42415
4	NMBFC	3183	4408	3414	3815	36985
5	SFL	5993	2505	7902	6796	7593
6	UFL	1275	7782	4343	8157	11753
7	PFL	1496	5387	7780	5119	9725
8	CITL	80307	21116	24484	25469	35400
9	UnFL	7938	12961	12994	11019	17614
10	GFCL	4892	4127	3316	7508	3426
11	NHMFL	9098	7176	13543	10502	23941
12	LFCl	12446	6339	17632	2863	27674
13	PFCL	22071	12715	15030	9916	19202
C	**Hotel Sector**	**7076**	**5009**	**4591**	**7921**	**4451**
1	SHL	7076	5009	4591	7921	4451
D	**Manufacturing and Processing**	**71898.2**	**223623.8**	**191471.2**	**5068.8**	**-171324**
1	BNL(B)	377650	326472	351877	323916	32650
2	NVGUL	-7343	-11487	-13671	-21588	-16725
3	GRUL	94282	-41757	736182	107482	-833608
4	KUL	21541	16811	36121	31287	-7275
5	JSML	9400	50141	475547	525337	-31661
E	**Insurance Sector**	**48893.8**	**90377.0**	**175967.0**	**124808.8**	**157132.0**
1	NLICL	148062	155	12301	8588	9103
2	HGICL	13668	14744	13116	15891	11853
3	NICL	6302	6426	3554	2744	-2760
4	LICL	27543	340183	674897	472012	610332
F	**Development Bank Sector**	**42311**	**66348.8**	**29736.2**	**-50012.6**	**-77530.4**
1	CBBL	1774	1995	6221	13706	14772
2	DCBL	55799	67140	94221	107456	130996

3	NUBL	8585	7429	10986	9959	15247
4	NDBL	5931	-297483	11697	-393700	-576886
5	PBBL	140622	549106	26583	7228	28219
G	**Others Sector**	**1863**	**-4950**	**42105**	**33722**	**35722**
	NFDCL	1863	-4950	42105	33722	35722

Source: SEBON

Annex 8: Trend of IFA/K by sector of selected enterprises

		Fiscal Year				
S.N.	**Enterprises**	**2002/2003**	**2003/2004**	**2004/2005**	**2005/2006**	**2006/2007**
A	**Commercial Banks**	**0.135**	**0.214**	**0.225**	**0.352**	**0.979**
1	NIBL	0.476	0.563	0.397	0.251	1.378
2	SCBL	0.016	0.050	-0.011	0.666	0.328
3	BOK	0.006	0.107	0.139	0.163	1.897
4	NICBL	0.044	0.138	0.374	0.330	0.314
B	**Finance Companies**	**1.443**	**0.204**	**-0.157**	**1.165**	**1.451**
1	NIDC	0.061	0.159	1.149	0.147	0.067
2	NSM	14.890	0.052	0.063	0.032	0.590
3	AFCL	0.009	0.138	0.061	0.122	0.231
4	NMBFC	0.273	0.527	-8.701	0.489	15.874
5	SFL	1.891	0.209	0.044	0.204	0.168
6	UFL	0.104	0.146	0.144	0.826	0.100
7	PFL	0.020	0.367	2.774	1.270	0.124
8	CITL	0.498	0.275	2.015	1.577	0.620
9	UnFL	0.136	0.044	0.171	0.358	0.239
10	GFCL	0.270	0.011	0.006	1.347	0.599
11	NHMFL	0.009	0.005	0.041	7.700	0.009
12	LFCl	0.154	0.058	0.125	1.043	0.175
13	PFCL	0.438	0.663	0.060	0.033	0.075
C	**Hotel**	**1.580**	**47.182**	**0.679**	**3.314**	**0.881**
1	SHL	1.580	47.182	0.679	3.314	0.881
D	**Manufacturing and Processing**	**0.233**	**0.027**	**0.062**	**0.193**	**-0.301**
1	BNL(T)	0.050	0.021	0.100	0.089	0.107
2	NVGUL	0.760	0.039	0.40	0.44	0.077
3	GRUL	0.317	0.016	0.093	0.024	0.099
4	KUL	0.034	0.031	0.082	0.786	-1.844
5	JSML	0.005	0.031	0.034	0.065	0.054
E	**Insurance**	**0.433**	**3.670**	**1.197**	**0.233**	**0.200**
1	NLICL	0.443	14.255	0.034	0.020	0.052
2	HGICL	1.052	0.051	3.676	0.208	0.077
3	NICL	0.069	0.221	0.768	0.582	0.302
4	LICL	0.170	0.152	0.310	0.121	0.370
F	**Development Bank**	**1.219**	**1.785**	**1.095**	**0.806**	**3.424**
1	CBBL	0.217	0.261	0.352	2.367	0.102
2	DCBL	5.176	6.547	4.370	0.862	1.875
3	NUBL	0.005	0.873	0.449	0.040	0.407
4	NDBL	0.566	1.193	0.020	0.616	0.079

5	PBBL	0.130	0.052	0.282	0.144	14.655
G	**Others**	**0.525**	**0.080**	**0.004**	**0.006**	**0.016**
1	NFDCL	0.525	0.080	0.004	0.006	0.016

Source: SEBON

Annex 9: Trend of CF/K by sector of selected enterprises

S.N.	Enterprises	Fiscal Year				
		2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
A	**Commercial Banks**	**3.843**	**1.782**	**2.539**	**3.695**	**3.820**
1	NIBL	0.359	0.921	1.023	1.196	1.460
2	SCBL	5.685	3.151	4.442	9.449	7.007
3	BOK	8.729	1.559	1.892	2.355	2.613
4	NICBL	0.600	1.497	2.798	1.782	4.201
B	**Finance**	**4.838**	**3.221**	**3.181**	**2.969**	**4.090**
1	NIDC	3.481	5.187	0.442	0.403	1.020
2	NSM	0.995	0.059	0.088	0.168	3.074
3	AFCL	2.127	3.617	3.996	5.923	7.032
4	NMBFC	4.593	8.333	5.551	1.185	12.255
5	SFL	1.424	0.212	0.574	0.511	0.593
6	UFL	0.405	2.661	1.515	1.221	0.964
7	PFL	0.478	2.179	3.034	1.992	1.783
8	CITL	38.443	8.343	10.126	9.528	5.825
9	UnFL	3.687	6.751	8.340	7.610	11.386
10	GFCL	2.246	1.867	0.327	5.344	1.196
11	NHMFL	0.257	0.210	0.414	3.272	0.436
12	LFCl	3.552	1.961	6.589	1.206	7.125
13	PFCL	1.205	0.498	0.359	0.238	0.476
C	**Hotel**	**16.494**	**12.811**	**0.560**	**0.900**	**0.099**
1	SHL	16.494	12.811	0.560	0.900	0.099
D	**Manufacturing and Processing**	**1.215**	**0.156**	**3.929**	**3.827**	**0.029**
1	BNL(T)	0.906	0.865	1.079	0.791	0.101
2	NVGUL	-0.329	-0.315	-0.392	-0.668	-0.568
3	GRUL	5.149	-0.090	17.009	0.250	-1.895
4	KUL	0.331	0.222	0.953	17.597	2.580
5	JSML	0.018	0.100	0.999	1.167	-0.073
E	**Insurance**	**8.628**	**12.386**	**26.614**	**17.940**	**26.543**
1	NLICL	28.947	0.026	0.139	0.096	0.102
2	HGICL	1.897	1.167	1.333	0.373	0.250
3	NICL	0.522	0.713	0.477	0.257	-0.232
4	LICL	3.148	47.638	104.506	71.033	106.052
F	**Development Bank**	**3.393**	**-27.040**	**5.524**	**-1.845**	**-0.310**
1	CBBL	0.865	0.886	2.652	5.456	1.747
2	DCBL	3.148	4.661	7.934	8.447	1.092
3	NUBL	1.007	0.571	0.377	0.220	0.322
4	NDBL	0.373	-179.315	0.669	-28.005	-26.516

5	PBBL	11.574	37.995	15.985	4.657	21.808
G	**Others**	**0.050**	**-0.073**	**0.574**	**0.516**	**0.543**
1	NFDCL	0.050	-0.073	0.574	0.516	0.543

Source: SEBON

Annex 10: Trend of DPS/EPS of selected enterprises

		Fiscal Year				
S.N.	**Enterprises**	**2002/2003**	**2003/2004**	**2004/2005**	**2005/2006**	**2006/2007**
A	**Commercial Banks**	**0.452**	**0.446**	**0.538**	**0.475**	**0.369**
1	NIBL	0.506	0.290	0.318	0.337	0.080
2	SCBL	0.737	0.767	0.838	0.739	0.478
3	BOK	0.282	0.364	0.498	0.412	0.460
4	NICBL	0.282	0.364	0.498	0.412	0.460
B	**Finance companies**	**0.618**	**0.312**	**0.376**	**0.378**	**0.543**
1	NIDC	0.000	0.000	0.000	0.667	0.837
2	NSM	0.000	0.000	0.000	0.000	0.479
3	AFCL	0.179	0.025	0.064	0.014	0.047
4	NMBFC	0.667	0.476	0.938	0.000	0.624
5	SFL	0.536	0.313	0.093	0.385	0.053
6	UFL	3.571	1.000	0.385	0.472	0.343
7	PFL	0.000	0.000	0.000	0.568	1.029
8	CITL	0.558	0.307	0.270	0.816	0.589
9	UnFL	0.000	0.000	0.333	0.000	0.973
10	GFCL	1.353	0.429	0.833	0.038	0.110
11	NHMFL	0.612	0.843	0.620	1.955	0.712
12	LFCl	0.000	0.000	1.000	0.000	0.943
13	PFCL	0.564	0.663	0.354	0.000	0.323
C	**Hotel**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
1	SHL	0.000	0.000	0.000	0.000	0.000
D	**Manufacturing and processing**	**0.201**	**0.052**	**0.000**	**0.000**	**0.000**
1	BNL(B)	1.006	0.258	0.000	0.000	0.000
2	NVGUL	0.000	0.000	0.000	0.000	0.000
3	GRUL	0.000	0.000	0.000	0.000	0.000
4	KUL	0.000	0.000	0.000	0.000	0.000
5	JSML	0.000	0.000	0.000	0.000	0.000
E	**Insurance**	**0.000**	**0.000**	**0.000**	**0.270**	**0.278**
1	NLICL	0.000	0.000	0.000	1.081	0.882
2	HGICL	0.000	0.000	0.000	0.000	0.231
3	NICL	0.000	0.000	0.000	0.000	0.000
4	LICL	0.000	0.000	0.000	0.000	0.000
F	**Development Bank**	**0.316**	**0.242**	**0.236**	**4.893**	**0.097**
1	CBBL	0.000	0.000	0.180	23.438	0.000
2	DCBL	1.014	0.548	0.567	0.046	0.038
3	NUBL	0.000	0.000	0.078	0.981	0.125
4	NDBL	0.000	0.000	0.000	0.000	0.000

S.N.		2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
5	PBBL	0.564	0.663	0.354	0.000	0.323
G	**Others**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
1	NFDCL	0.000	0.000	0.000	0.000	0.000

Source: SEBON

Annex 11: Trend of MPS/BVPS of selected enterprises

		Fiscal Year				
S.N.	Enterprises	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
A	**Commercial Banks**	**2.449**	**2.533**	**3.123**	**6.600**	**8.969**
1	NIBL	3.664	3.052	2.899	5.257	7.377
2	SCBL	4.069	4.373	5.557	8.066	11.523
3	BOK	1.031	1.353	2.019	6.538	8.488
4	NICBL	1.031	1.353	2.019	6.538	8.488
B	**Finance Companies**	**1.224**	**1.074**	**1.224**	**1.372**	**2.308**
1	NIDC	1.000	0.836	0.935	1.342	3.614
2	NSM	1.214	0.981	1.132	1.261	2.256
3	AFCL	1.349	1.006	1.773	2.564	3.086
4	NMBFC	1.132	0.907	1.289	1.568	5.915
5	SFL	1.198	1.008	1.306	1.197	1.561
6	UFL	0.963	1.055	1.087	1.225	2.811
7	PFL	0.667	0.839	0.775	1.070	1.014
8	CITL	1.700	1.650	2.000	1.173	3.000
9	UnFL	1.327	0.935	0.850	1.455	1.190
10	GFCL	0.911	0.897	0.915	0.759	1.385
11	NHMFL	1.803	1.586	1.530	1.356	1.731
12	LFCl	1.132	0.816	0.869	1.303	0.919
13	PFCL	1.518	1.450	1.457	1.558	1.526
C	**Hotel**	**1.654**	**1.692**	**1.613**	**1.998**	**2.286**
1	SHL	1.654	1.692	1.613	1.998	2.286
D	**Manufacturing and Processing**	**0.340**	**0.357**	**0.652**	**0.513**	**0.555**
1	BNL(T)	1.934	1.485	1.246	1.385	1.419
2	NVGUL	-0.343	0.831	0.831	0.831	1.066
3	GRUL	0.833	0.833	-0.714	0.488	0.507
4	KUL	0.418	0.609	0.654	0.698	0.708
5	JSML	-0.307	-0.307	1.244	-0.839	-0.923
E	**Insurance**	**3.608**	**1.089**	**1.674**	**2.227**	**2.244**
1	NLICL	11.500	1.620	3.040	4.270	4.216
2	HGICL	0.979	0.745	0.755	0.608	0.778
3	NICL	0.703	0.593	0.561	0.431	0.583
4	LICL	1.250	1.400	2.340	3.600	3.400
F	**Development Bank**	**0.992**	**0.341**	**0.482**	**0.982**	**1.678**
1	CBBL	1.106	1.008	0.719	0.409	1.254
2	DCBL	1.377	1.464	2.532	3.079	6.190
3	NUBL	0.770	0.559	0.547	0.584	0.583
4	NDBL	1.296	-1.768	-2.844	-0.717	-1.161

5	PBBL	1.518	1.450	1.457	1.558	1.526
G	**Others**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**
1	NFDCL	0.75	0.75	0.75	0.75	0.75

Source: SEBON

Annex 12: Data summary of ratio of various variables

S.N.	Enterprises	Year	IFA/K	MPS/BVPS	DPS/EPS	CF/K
1	NIBL	2002/2003	0.476	3.664	0.506	0.359
2	NIBL	2003/2004	0.563	3.052	0.290	0.921
3	NIBL	2004/2005	0.397	2.899	0.318	1.023
4	NIBL	2005/2006	0.251	5.257	0.337	1.196
5	NIBL	2006/2007	1.378	7.377	0.080	1.460
6	SCBL	2002/2003	0.016	4.069	0.737	5.685
7	SCBL	2003/2004	0.050	4.373	0.767	3.151
8	SCBL	2004/2005	-0.011	5.557	0.838	4.442
9	SCBL	2005/2006	0.666	8.066	0.739	9.449
10	SCBL	2006/2007	0.328	11.523	0.478	7.007
11	BOK	2002/2003	0.006	1.031	0.282	8.729
12	BOK	2003/2004	0.107	1.353	0.364	1.559
13	BOK	2004/2005	0.139	2.019	0.498	1.892
14	BOK	2005/2006	0.163	6.538	0.412	2.355
15	BOK	2006/2007	1.897	8.488	0.460	2.613
16	NICBL	2002/2003	0.044	1.031	0.282	0.600
17	NICBL	2003/2004	0.138	1.353	0.364	1.497
18	NICBL	2004/2005	0.374	2.019	0.498	2.798
19	NICBL	2005/2006	0.330	6.538	0.412	1.782
20	NICBL	2006/2007	0.314	8.488	0.460	4.201
21	NIDC	2002/2003	0.061	1.000	0.000	3.481
22	NIDC	2003/2004	0.159	0.836	0.000	5.187
23	NIDC	2004/2005	1.149	0.935	0.000	0.442
24	NIDC	2005/2006	0.147	1.342	0.667	0.403
25	NIDC	2006/2007	0.067	3.614	0.837	1.020
26	NSM	2002/2003	14.890	1.214	0.000	0.995
27	NSM	2003/2004	0.052	0.981	0.000	0.059
28	NSM	2004/2005	0.063	1.132	0.000	0.088
29	NSM	2005/2006	0.032	1.261	0.000	0.168
30	NSM	2006/2007	0.590	2.256	0.479	3.074
31	AFCL	2002/2003	0.009	1.349	0.179	2.127
32	AFCL	2003/2004	0.138	1.006	0.025	3.617
33	AFCL	2004/2005	0.061	1.773	0.064	3.996
34	AFCL	2005/2006	0.122	2.564	0.014	5.923
35	AFCL	2006/2007	0.231	3.086	0.047	7.032
36	NMBFC	2002/2003	0.273	1.132	0.667	4.593

37	NMBFC	2003/2004	0.527	0.907	0.476	8.333
38	NMBFC	2004/2005	-8.701	1.289	0.938	5.551
39	NMBFC	2005/2006	0.489	1.568	0.000	1.185
40	NMBFC	2006/2007	15.874	5.915	0.624	12.255

41	SFL	2002/2003	1.891	1.198	0.536	1.424
42	SFL	2003/2004	0.209	1.008	0.313	0.212
43	SFL	2004/2005	0.044	1.306	0.093	0.574
44	SFL	2005/2006	0.204	1.197	0.385	0.511
45	SFL	2006/2007	0.168	1.561	0.053	0.593
46	UFL	2002/2003	0.104	0.963	3.571	0.405
47	UFL	2003/2004	0.146	1.055	1.000	2.661
48	UFL	2004/2005	0.144	1.087	0.385	1.515
49	UFL	2005/2006	0.826	1.225	0.472	1.221
50	UFL	2006/2007	0.100	2.811	0.343	0.964
51	PFL	2002/2003	0.020	0.667	0.000	0.478
52	PFL	2003/2004	0.367	0.839	0.000	2.179
53	PFL	2004/2005	2.774	0.775	0.000	3.034
54	PFL	2005/2006	1.270	1.070	0.568	1.992
55	PFL	2006/2007	0.124	1.014	1.029	1.783
56	CITL	2002/2003	0.498	1.700	0.558	38.443
57	CITL	2003/2004	0.275	1.650	0.307	8.343
58	CITL	2004/2005	2.015	2.000	0.270	10.126
59	CITL	2005/2006	1.577	1.173	0.816	9.528
60	CITL	2006/2007	0.620	3.000	0.589	5.825
61	UnFL	2002/2003	0.136	1.327	0.000	3.687
62	UnFL	2003/2004	0.044	0.935	0.000	6.751
63	UnFL	2004/2005	0.171	0.850	0.333	8.340
64	UnFL	2005/2006	0.358	1.455	0.000	7.610
65	UnFL	2006/2007	0.239	1.190	0.973	11.386
66	GFCL	2002/2003	0.270	0.911	1.353	2.246
67	GFCL	2003/2004	0.011	0.897	0.429	1.867
68	GFCL	2004/2005	0.006	0.915	0.833	0.327
69	GFCL	2005/2006	1.347	0.759	0.038	5.344
70	GFCL	2006/2007	0.599	1.385	0.110	1.196
71	NHMFL	2002/2003	0.009	1.803	0.612	0.257
72	NHMFL	2003/2004	0.005	1.586	0.843	0.210
73	NHMFL	2004/2005	0.041	1.530	0.620	0.414
74	NHMFL	2005/2006	7.700	1.356	1.955	3.272
75	NHMFL	2006/2007	0.009	1.731	0.712	0.436
76	LFCl	2002/2003	0.154	1.132	0.000	3.552
77	LFCl	2003/2004	0.058	0.816	0.000	1.961
78	LFCl	2004/2005	0.125	0.869	1.000	6.589
79	LFCl	2005/2006	1.043	1.303	0.000	1.206

80	LFCl	2006/2007	0.175	0.919	0.943	7.125
81	PFCL	2002/2003	0.438	1.518	0.564	1.205
82	PFCL	2003/2004	0.663	1.450	0.663	0.498
83	PFCL	2004/2005	0.060	1.457	0.354	0.359
84	PFCL	2005/2006	0.033	1.558	0.000	0.238
85	PFCL	2006/2007	0.075	1.526	0.323	0.476
86	SHL	2002/2003	1.580	1.654	0.000	16.494
87	SHL	2003/2004	47.182	1.692	0.000	12.811
88	SHL	2004/2005	0.679	1.613	0.000	0.560
89	SHL	2005/2006	3.314	1.998	0.000	0.900
90	SHL	2006/2007	0.881	2.286	0.000	0.099
91	BNL(T)	2002/2003	0.050	1.934	1.006	0.906
92	BNL(T)	2003/2004	0.021	1.485	0.258	0.865
93	BNL(T)	2004/2005	0.100	1.246	0.000	1.079
94	BNL(T)	2005/2006	0.089	1.385	0.000	0.791
95	BNL(T)	2006/2007	0.107	1.419	0.000	0.101
96	NVGUL	2002/2003	0.760	-0.343	0.000	-0.329
97	NVGUL	2003/2004	0.039	0.000	0.000	-0.315
98	NVGUL	2004/2005	0.040	0.831	0.000	-0.392
99	NVGUL	2005/2006	0.044	0.831	0.000	-0.668
100	NVGUL	2006/2007	0.077	1.066	0.000	-0.568
101	GRUL	2002/2003	0.317	0.831	0.000	5.149
102	GRUL	2003/2004	0.016	0.831	0.000	-0.090
103	GRUL	2004/2005	0.093	-0.714	0.000	17.009
104	GRUL	2005/2006	0.024	0.488	0.000	0.250
105	GRUL	2006/2007	0.099	0.507	0.000	-1.895
106	KUL	2002/2003	0.034	0.418	0.000	0.331
107	KUL	2003/2004	0.031	0.609	0.000	0.222
108	KUL	2004/2005	0.082	0.654	0.000	0.953
109	KUL	2005/2006	0.786	0.698	0.000	17.597
110	KUL	2006/2007	-1.844	0.708	0.000	2.580
111	JSML	2002/2003	0.005	-0.307	0.000	0.018
112	JSML	2003/2004	0.031	-0.307	0.000	0.100
113	JSML	2004/2005	0.034	1.244	0.000	0.999
114	JSML	2005/2006	0.065	-0.839	0.000	1.167
115	JSML	2006/2007	0.054	-0.923	0.000	-0.073
116	NLICL	2002/2003	0.443	11.500	0.000	28.947
117	NLICL	2003/2004	14.255	1.620	0.000	0.026
118	NLICL	2004/2005	0.034	3.040	0.000	0.139
119	NLICL	2005/2006	0.020	4.270	1.081	0.096
120	NLICL	2006/2007	0.052	4.216	0.882	0.102
121	HGICL	2002/2003	1.052	0.979	0.000	1.897
122	HGICL	2003/2004	0.051	0.745	0.000	1.167
123	HGICL	2004/2005	3.676	0.755	0.000	1.333
124	HGICL	2005/2006	0.208	0.608	0.000	0.373

125	HGICL	2006/2007	0.077	0.778	0.231	0.250
126	NICL	2002/2003	0.069	0.703	0.000	0.522
127	NICL	2003/2004	0.221	0.593	0.000	0.713
128	NICL	2004/2005	0.768	0.561	0.000	0.477
129	NICL	2005/2006	0.582	0.431	0.000	0.257
130	NICL	2006/2007	0.302	0.583	0.000	-0.232
131	LICL	2002/2003	0.170	1.250	0.000	3.148
132	LICL	2003/2004	0.152	1.400	0.000	47.638
133	LICL	2004/2005	0.310	2.340	0.000	104.506
134	LICL	2005/2006	0.121	3.600	0.000	71.033
135	LICL	2006/2007	0.370	3.400	0.000	106.052
136	CBBL	2002/2003	0.217	1.106	0.000	0.865
137	CBBL	2003/2004	0.261	1.008	0.000	0.886
138	CBBL	2004/2005	0.352	0.719	0.180	2.652
139	CBBL	2005/2006	2.367	0.409	23.438	5.456
140	CBBL	2006/2007	0.102	1.254	0.000	1.747
141	DCBL	2002/2003	5.176	1.377	1.014	3.148
142	DCBL	2003/2004	6.547	1.464	0.548	4.661
143	DCBL	2004/2005	4.370	2.532	0.567	7.934
144	DCBL	2005/2006	0.862	3.079	0.046	8.447
145	DCBL	2006/2007	1.875	6.190	0.038	1.092
146	NUBL	2002/2003	0.005	0.770	0.000	1.007
147	NUBL	2003/2004	0.873	0.559	0.000	0.571
148	NUBL	2004/2005	0.449	0.547	0.078	0.377
149	NUBL	2005/2006	0.040	0.584	0.981	0.220
150	NUBL	2006/2007	0.407	0.583	0.125	0.322
151	NDBL	2002/2003	0.566	1.296	0.000	0.373
152	NDBL	2003/2004	1.193	-1.768	0.000	-179.315
153	NDBL	2004/2005	0.020	-2.844	0.000	0.669
154	NDBL	2005/2006	0.616	-0.717	0.000	-28.005
155	NDBL	2006/2007	0.079	-1.161	0.000	-26.516
156	PBBL	2002/2003	1.130	1.518	0.154	1.132
157	PBBL	2003/2004	0.052	1.450	0.058	0.816
158	PBBL	2004/2005	0.282	1.457	0.125	0.869
159	PBBL	2005/2006	0.144	1.558	1.043	1.303
160	PBBL	2006/2007	14.655	1.526	0.175	0.919
161	NFDCL	2002/2003	0.525	0.75	0.438	1.518
162	NFDCL	2003/2004	0.080	0.75	0.663	1.450
163	NFDCL	2004/2005	0.004	0.75	0.060	1.457
164	NFDCL	2005/2006	0.006	0.75	0.033	1.558
165	NFDCL	2006/2007	0.016	0.75	0.075	1.526

Source: Annex 1 to 11

Annex: 13 Data included in the model

S.N	Enterprises	Year	IFA	CF	(IFA)t-1	MPS/BVPS	DPS/EPS	log IFA	log CF
1	NIBL	2003/04	107613	176074	170793	3.052	0.29	5.03186	5.2457
2	NIBL	2004/05	99210	255551	107613	2.899	0.318	4.99656	5.4075
3	NIBL	2005/06	80560	383330	99210	5.257	0.337	4.90612	5.5836
4	NIBL	2006/07	473172	501398	80560	7.377	0.08	5.67502	5.7002
5	SCBL	2003/04	9512	604002	1573	4.373	0.767	3.97827	5.781
6	SCBL	2004/05	1519	605155	9512	5.557	0.838	3.18156	5.7819
7	SCBL	2005/06	47539	674774	1519	8.066	0.739	4.67705	5.8292
8	SCBL	2006/07	33230	709845	47539	11.523	0.478	4.52153	5.8512
9	BOK	2003/04	10017	145992	577	1.353	0.364	4.00074	5.1643
10	BOK	2004/05	11606	158245	10017	2.019	0.498	4.06468	5.1993
11	BOK	2005/06	15514	224269	11606	6.538	0.412	4.19072	5.3508
12	BOK	2006/07	210101	289405	15514	8.488	0.46	5.32243	5.4615
13	NICBL	2003/04	6928	75147	2395	1.353	0.364	3.84061	4.8759
14	NICBL	2004/05	16210	121123	6928	2.019	0.498	4.20978	5.0832
15	NICBL	2005/06	19632	106011	16210	6.538	0.412	4.29296	5.0254
16	NICBL	2006/07	12499	167454	19632	8.488	0.46	4.09688	5.2239
17	NIDC	2003/04	658	21424	272	1	0	2.81823	4.3309
18	NIDC	2004/05	39624	15229	658	0.836	0	4.59796	4.1827
19	NIDC	2005/06	6174	16942	39624	0.935	0	3.79057	4.229
20	NIDC	2006/07	3109	47334	6174	1.342	0.667	3.49262	4.6752
21	NSM	2003/04	6634	7518	66527	1.214	0	3.82178	3.8761
22	NSM	2004/05	8008	11044	6634	0.981	0	3.90352	4.0431
23	NSM	2005/06	3802	19982	8008	1.132	0	3.58001	4.3006
24	NSM	2006/07	6778	35332	3802	1.261	0	3.8311	4.5482
25	AFCL	2003/04	832	21814	59	1.349	0.179	2.92012	4.3387
26	AFCL	2004/05	374	24629	832	1.006	0.025	2.57287	4.3914
27	AFCL	2005/06	721	35131	374	1.773	0.064	2.85794	4.5457
28	AFCL	2006/07	1394	42415	721	2.564	0.014	3.14426	4.6275
29	NMBFC	2003/04	279	4408	189	1.132	0.667	2.4456	3.6442
30	NMBFC	2004/05	5351	3414	279	0.907	0.476	3.72843	3.5333
31	NMBFC	2005/06	1574	3815	5351	1.289	0.938	3.197	3.5815
32	NMBFC	2006/07	47908	36985	1574	1.568	0	4.68041	4.568
33	SFL	2003/04	2475	2505	7962	1.198	0.536	3.39358	3.3988
34	SFL	2004/05	604	7902	2475	1.008	0.313	2.78104	3.8977
35	SFL	2005/06	2719	6796	604	1.306	0.093	3.43441	3.8323
36	SFL	2006/07	2152	7593	2719	1.197	0.385	3.33284	3.8804
37	UFL	2003/04	426	7782	328	0.963	3.571	2.62941	3.8911
38	UFL	2004/05	413	4343	426	1.055	1	2.61595	3.6378
39	UFL	2005/06	5515	8157	413	1.087	0.385	3.74155	3.9115
40	UFL	2006/07	1214	11753	5515	1.225	0.472	3.08422	4.0701
41	PFL	2003/04	906	5387	64	0.667	0	2.95713	3.7313

42	PFL	2004/05	7113	7780	906	0.839	0	3.85205	3.891
43	PFL	2005/06	3264	5119	7113	0.775	0	3.51375	3.7092
44	PFL	2006/07	674	9725	3264	1.07	0.568	2.82866	3.9879
45	CITL	2003/04	697	21116	1041	1.7	0.558	2.84323	4.3246
46	CITL	2004/05	4873	24484	697	1.65	0.307	3.6878	4.3889
47	CITL	2005/06	4214	25469	4873	2	0.27	3.62469	4.406
48	CITL	2006/07	3768	35400	4214	1.173	0.816	3.57611	4.549
49	UnFL	2003/04	84	12961	292	1.327	0	1.92428	4.1126
50	UnFL	2004/05	267	12994	84	0.935	0	2.42651	4.1137
51	UnFL	2005/06	519	11019	267	0.85	0.333	2.71517	4.0421
52	UnFL	2006/07	369	17614	519	1.455	0	2.56703	4.2459
53	GFCL	2003/04	24	4127	589	0.911	1.353	1.38021	3.6156
54	GFCL	2004/05	59	3316	24	0.897	0.429	1.77085	3.5206
55	GFCL	2005/06	1893	7508	59	0.915	0.833	3.27715	3.8755
56	GFCL	2006/07	1716	3426	1893	0.759	0.038	3.23452	3.5348
57	NHMFL	2003/04	158	7176	327	1.803	0.612	2.19866	3.8559
58	NHMFL	2004/05	1355	13543	158	1.586	0.843	3.13194	4.1317
59	NHMFL	2005/06	24718	10502	1355	1.53	0.62	4.39301	4.0213
60	NHMFL	2006/07	469	23941	24718	1.356	1.955	2.67117	4.3791
61	LFCI	2003/04	188	6339	541	1.132	0	2.27416	3.802
62	LFCI	2004/05	334	17632	188	0.816	0	2.52375	4.2463
63	LFCI	2005/06	2474	2863	334	0.869	1	3.3934	3.4568
64	LFCI	2006/07	678	27674	2474	1.303	0	2.83123	4.4421
65	PFCL	2003/04	16933	12715	8026	1.518	0.564	4.22873	4.1043
66	PFCL	2004/05	2525	15030	16933	1.45	0.663	3.40226	4.177
67	PFCL	2005/06	1373	9916	2525	1.457	0.354	3.13767	3.9963
68	PFCL	2006/07	3017	19202	1373	1.558	0	3.47958	4.2833
69	SHL	2003/04	18448	5009	678	1.654	0	4.26595	3.6998
70	SHL	2004/05	5569	4591	18448	1.692	0	3.74578	3.6619
71	SHL	2005/06	29162	7921	5569	1.613	0	4.46482	3.8988
72	SHL	2006/07	39715	4451	29162	1.998	0	4.59895	3.6485
73	BNL(T)	2003/04	7999	326472	20987	1.934	1.006	3.90304	5.5138
74	BNL(T)	2004/05	32457	351877	7999	1.485	0.258	4.51131	5.5464
75	BNL(T)	2005/06	36433	323916	32457	1.246	0	4.56149	5.5104
76	BNL(T)	2006/07	34511	32650	36433	1.385	0	4.53796	4.5139
77	NVGUL	2003/04	1405	11487	16940	-0.343	0	3.14768	4.0602
78	NVGUL	2004/05	2276	13671	1405	0	0	3.35717	4.1358
79	NVGUL	2005/06	2276	21588	2276	0.831	0	3.35717	4.3342
80	NVGUL	2006/07	2276	16725	2276	1.066	0	3.35717	4.2234
81	GRUL	2003/04	7289	41757	5801	0.831	0	3.86267	4.6207
82	GRUL	2004/05	4020	736182	7289	0.831	0	3.60423	5.867
83	GRUL	2005/06	10465	107482	4020	-0.714	0	4.01974	5.0313
84	GRUL	2006/07	43590	833608	10465	0.488	0	4.63939	5.921
85	KUL	2003/04	2325	16811	2188	0.418	0	3.36642	4.2256

86	KUL	2004/05	3128	36121	2325	0.609	0	3.49527	4.5578
87	KUL	2005/06	1398	31287	3128	0.654	0	3.14551	4.4954
88	KUL	2006/07	5200	7275	1398	0.698	0	3.716	3.8618
89	JSML	2003/04	15602	50141	2611	-0.307	0	4.19318	4.7002
90	JSML	2004/05	16406	475547	15602	-0.307	0	4.215	5.6772
91	JSML	2005/06	29044	525337	16406	1.244	0	4.46306	5.7204
92	JSML	2006/07	23422	31661	29044	-0.839	0	4.36962	4.5005
93	NLICL	2003/04	84103	155	2267	11.5	0	4.92481	2.1903
94	NLICL	2004/05	3038	12301	84103	1.62	0	3.48259	4.0899
95	NLICL	2005/06	1749	8588	3038	3.04	0	3.24279	3.9339
96	NLICL	2006/07	4624	9103	1749	4.27	1.081	3.66502	3.9592
97	HGICL	2003/04	646	14744	7577	0.979	0	2.81023	4.1686
98	HGICL	2004/05	36176	13116	646	0.745	0	4.55842	4.1178
99	HGICL	2005/06	8873	15891	36176	0.755	0	3.94807	4.2012
100	HGICL	2006/07	3664	11853	8873	0.608	0	3.56396	4.0738
101	NICL	2003/04	1992	6426	828	0.703	0	3.29929	3.8079
102	NICL	2004/05	5715	3554	1992	0.593	0	3.75702	3.5507
103	NICL	2005/06	6203	2744	5715	0.561	0	3.7926	3.4384
104	NICL	2006/07	3597	2760	6203	0.431	0	3.55594	3.4409
105	LICL	2003/04	1082	340183	1491	1.25	0	3.03423	5.5317
106	LICL	2004/05	2000	674897	1082	1.4	0	3.30103	5.8292
107	LICL	2005/06	802	472012	2000	2.34	0	2.90417	5.674
108	LICL	2006/07	2132	610332	802	3.6	0	3.32879	5.7856
109	CBBL	2003/04	588	1995	445	1.106	0	2.76938	3.2999
110	CBBL	2004/05	826	6221	588	1.008	0	2.91698	3.7939
111	CBBL	2005/06	5946	13706	826	0.719	0.18	3.77422	4.1369
112	CBBL	2006/07	865	14772	5946	0.409	23.438	2.93702	4.1694
113	DCBL	2003/04	94314	67140	91749	1.377	1.014	4.97458	4.827
114	DCBL	2004/05	51892	94221	94314	1.464	0.548	4.7151	4.9741
115	DCBL	2005/06	10966	107456	51892	2.532	0.567	4.04005	5.0312
116	DCBL	2006/07	25638	130996	10966	3.079	0.046	4.40888	5.1173
117	NUBL	2003/04	11356	7429	43	0.77	0	4.05523	3.8709
118	NUBL	2004/05	13082	10986	11356	0.559	0	4.11667	4.0408
119	NUBL	2005/06	1787	9959	13082	0.547	0.078	3.25212	3.9982
120	NUBL	2006/07	19316	15247	1787	0.584	0.981	4.28592	4.1832
121	NDBL	2003/04	1979	297483	8993	1.296	0	3.29645	5.4735
122	NDBL	2004/05	354	11697	1979	-1.768	0	2.549	4.0681
123	NDBL	2005/06	8654	393700	354	-2.844	0	3.93722	5.5952
124	NDBL	2006/07	1721	576886	8654	-0.717	0	3.23578	5.7611
125	PBBL	2003/04	755	549106	1585	1.518	0.154	2.87795	5.7397
126	PBBL	2004/05	469	26583	755	1.45	0.058	2.67117	4.4246
127	PBBL	2005/06	223	7228	469	1.457	0.125	2.3483	3.859
128	PBBL	2006/07	18963	28219	223	1.558	1.043	4.27791	4.4505
129	NFDCL	2003/04	5475	4950	19667	0.75	0.438	3.73838	3.6946

S.N	Entreprises	Year	IFA	CF	(IFA)t-1	MPS/BVPS	DPS/EPS	Log IFA	Log CF
130	NFDCL	2004/05	323	42105	5475	0.75	0.663	2.5092	4.6243
131	NFDCL	2005/06	392	33722	323	0.75	0.06	2.59329	4.5279
132	NFDCL	2006/07	1080	35722	392	0.75	0.033	3.03342	4.5529

Annex 14: Dropping DPS/EPS of the year with zero value

S.N	Entreprises	Year	IFA	CF	(IFA)t-1	MPS/BVPS	DPS/EPS	Log IFA	Log CF
1	NIBL	2003/04	107613	176074	170793	3.052	0.29	5.03186	5.2457
2	NIBL	2004/05	99210	255551	107613	2.899	0.318	4.99656	5.4075
3	NIBL	2005/06	80560	383330	99210	5.257	0.337	4.90612	5.5836
4	NIBL	2006/07	473172	501398	80560	7.377	0.08	5.67502	5.7002
5	SCBL	2003/04	9512	604002	1573	4.373	0.767	3.97827	5.781
6	SCBL	2004/05	1519	605155	9512	5.557	0.838	3.18156	5.7819
7	SCBL	2005/06	47539	674774	1519	8.066	0.739	4.67705	5.8292
8	SCBL	2006/07	33230	709845	47539	11.523	0.478	4.52153	5.8512
9	BOK	2003/04	10017	145992	577	1.353	0.364	4.00074	5.1643
10	BOK	2004/05	11606	158245	10017	2.019	0.498	4.06468	5.1993
11	BOK	2005/06	15514	224269	11606	6.538	0.412	4.19072	5.3508
12	BOK	2006/07	210101	289405	15514	8.488	0.46	5.32243	5.4615
13	NICBL	2003/04	6928	75147	2395	1.353	0.364	3.84061	4.8759
14	NICBL	2004/05	16210	121123	6928	2.019	0.498	4.20978	5.0832
15	NICBL	2005/06	19632	106011	16210	6.538	0.412	4.29296	5.0254
16	NICBL	2006/07	12499	167454	19632	8.488	0.46	4.09688	5.2239
17	NIDC	2006/07	3109	47334	6174	1.342	0.667	3.49262	4.6752
18	AFCL	2003/04	832	21814	59	1.349	0.179	2.92012	4.3387
19	AFCL	2004/05	374	24629	832	1.006	0.025	2.57287	4.3914
20	AFCL	2005/06	721	35131	374	1.773	0.064	2.85794	4.5457
21	AFCL	2006/07	1394	42415	721	2.564	0.014	3.14426	4.6275
22	NMBFC	2003/04	279	4408	189	1.132	0.667	2.4456	3.6442
23	NMBFC	2004/05	5351	3414	279	0.907	0.476	3.72843	3.5333
24	NMBFC	2005/06	1574	3815	5351	1.289	0.938	3.197	3.5815
25	SFL	2003/04	2475	2505	7962	1.198	0.536	3.39358	3.3988
26	SFL	2004/05	604	7902	2475	1.008	0.313	2.78104	3.8977
27	SFL	2005/06	2719	6796	604	1.306	0.093	3.43441	3.8323
28	SFL	2006/07	2152	7593	2719	1.197	0.385	3.33284	3.8804
29	UFL	2003/04	426	7782	328	0.963	3.571	2.62941	3.8911
30	UFL	2004/05	413	4343	426	1.055	1	2.61595	3.6378
31	UFL	2005/06	5515	8157	413	1.087	0.385	3.74155	3.9115
32	UFL	2006/07	1214	11753	5515	1.225	0.472	3.08422	4.0701
33	PFL	2006/07	674	9725	3264	1.07	0.568	2.82866	3.9879
34	CITL	2003/04	697	21116	1041	1.7	0.558	2.84323	4.3246

35	CITL	2004/05	4873	24484	697	1.65	0.307	3.6878	4.3889
36	CITL	2005/06	4214	25469	4873	2	0.27	3.62469	4.406
37	CITL	2006/07	3768	35400	4214	1.173	0.816	3.57611	4.549
38	UnFL	2005/06	519	11019	267	0.85	0.333	2.71517	4.0421
39	GFCL	2003/04	24	4127	589	0.911	1.353	1.38021	3.6156
40	GFCL	2004/05	59	3316	24	0.897	0.429	1.77085	3.5206
41	GFCL	2005/06	1893	7508	59	0.915	0.833	3.27715	3.8755
42	GFCL	2006/07	1716	3426	1893	0.759	0.038	3.23452	3.5348
43	NHMFL	2003/04	158	7176	327	1.803	0.612	2.19866	3.8559
44	NHMFL	2004/05	1355	13543	158	1.586	0.843	3.13194	4.1317
45	NHMFL	2005/06	24718	10502	1355	1.53	0.62	4.39301	4.0213
46	NHMFL	2006/07	469	23941	24718	1.356	1.955	2.67117	4.3791
47	LFCI	2005/06	2474	2863	334	0.869	1	3.3934	3.4568
48	PFCL	2003/04	16933	12715	8026	1.518	0.564	4.22873	4.1043
49	PFCL	2004/05	2525	15030	16933	1.45	0.663	3.40226	4.177
50	PFCL	2005/06	1373	9916	2525	1.457	0.354	3.13767	3.9963
51	BNL(T)	2003/04	7999	326472	20987	1.934	1.006	3.90304	5.5138
52	BNL(T)	2004/05	32457	351877	7999	1.485	0.258	4.51131	5.5464
53	NLICL	2006/07	4624	9103	1749	4.27	1.081	3.66502	3.9592
54	CBBL	2005/06	5946	13706	826	0.719	0.18	3.77422	4.1369
55	CBBL	2006/07	865	14772	5946	0.409	23.438	2.93702	4.1694
56	DCBL	2003/04	94314	67140	91749	1.377	1.014	4.97458	4.827
57	DCBL	2004/05	51892	94221	94314	1.464	0.548	4.7151	4.9741
58	DCBL	2005/06	10966	107456	51892	2.532	0.567	4.04005	5.0312
59	DCBL	2006/07	25638	130996	10966	3.079	0.046	4.40888	5.1173
60	NUBL	2005/06	1787	9959	13082	0.547	0.078	3.25212	3.9982
61	NUBL	2006/07	19316	15247	1787	0.584	0.981	4.28592	4.1832
62	PBBL	2003/04	755	549106	1585	1.518	0.154	2.87795	5.7397
63	PBBL	2004/05	469	26583	755	1.45	0.058	2.67117	4.4246
64	PBBL	2005/06	223	7228	469	1.457	0.125	2.3483	3.859
65	PBBL	2006/07	18963	28219	223	1.558	1.043	4.27791	4.4505
66	NFDCL	2003/04	5475	4950	19667	0.75	0.438	3.73838	3.6946
67	NFDCL	2004/05	323	42105	5475	0.75	0.663	2.5092	4.6243
68	NFDCL	2005/06	392	33722	323	0.75	0.06	2.59329	4.5279
69	NFDCL	2006/07	1080	35722	392	0.75	0.033	3.03342	4.5529

Annex 15: List of listed companies in the NEPSE index.

S.N	Company	code	Paid up share	Par Value	Paid up Value
1	Nabil Bank Ltd.	NABIL	6,873,930	100	687,393,000
2	Nepal Investment Bank Ltd.	NIB	16,060,651	100	1,606,065,100
3	Standard Chartered Bank Ltd.	SCB	6,807,840	100	680,784,000
4	Himalayan Bank Ltd.	HBL	12,162,150	100	1,216,215,000
5	Nepal SBI Bank Limited	SBI	8,734,791	100	873,479,100
6	Nepal Bangladesh Bank Ltd.	NBB	7,442,000	100	744,200,000
7	Everest Bank Ltd	EBL	4,914,000	100	491,400,000
8	Bank of Kathmandu	BOK	6,031,413	100	603,141,300
9	Nepal Industrial & Co.Bank	NICB	9,504,000	100	950,400,000
10	Machhachapuchhre Bank Ltd	MBL	13,146,420	100	1,314,642,000
11	Laxmi Bank Limited	LBL	9,150,000	100	915,000,000
12	Kumari Bank Ltd	KBL	10,782,720	100	1,078,272,000
13	Lumbini Bank Ltd.	LUBL	9,995,000	100	999,500,000
14	Nepal Credit & Com. Bank	NCCB	11,368,047	100	1,136,804,700
1	Siddhartha Bank Limited	SBL	8,280,000	100	828,000,000
16	NMB Bank mLtd				
18	Nepal Finance and Saving Co.Ltd.	NFS	300,000	100	30,000,000
17	Development na d credit bank ltd				
19	NIDC Capital Markets Ltd.	NCM	1,012,500	100	101,250,000
20	National Finance Co. Ltd.	NFC	1,568,818	100	156,881,800
21	Nepal Share Markets Ltd.	NSM	4,320,000	100	432,000,000
22	Annapurna Finance Company Limited	AFC	2,016,000	100	201,600,000
23	Kathmandu Finance Limited.	KFL	379,500	100	37,950,000
24	Peoples Finance Limited.	PFCL	840,000	100	84,000,000
25	Union Finance Co. Ltd.	UFCL	750,000	100	75,000,000
26	Citizen Investment Trust	CIT	600,000	100	60,000,000
27	Nepal Aawas Bikas Beeta Co. Ltd.	NABB	706,180	100	70,618,000
28	Narayani Finance Limited	NFL	666,990	100	66,699,000
29	Yeti Finance Company Ltd.	YFL	312,500	100	31,250,000
30	Gorkha Finance Ltd.	GFLK	300,000	100	30,000,000
31	Samjhana Finance Co. Ltd.	SFC	225,000	100	22,500,000
32	Universal Finance Ltd.	UFLK	602,184	100	60,218,400
33	Nepal Housing & Merchant Fin.	NHMF	804,402	100	80,440,200
34	General Finance Ltd.	GFL	242,434	100	24,243,400
35	Maha Laxmi Finance Ltd.	MFL	800,000	100	80,000,000

36	Lalitpur Finance Ltd.	LFC	759,375	100	75,937,500
37	Goodwill Finance Co. Ltd.	GFCL	1,050,000	100	105,000,000
38	Paschimanchal Finance Co. Ltd	PFC	556,600	100	55,660,000
39	Pokhara Finance Ltd.	PFL	800,000	100	80,000,000
40	Lumbini Finance Ltd.	LFLC	900,000	100	90,000,000
41	Siddhartha Finance Limited	SFL	520,000	100	52,000,000
42	Alpic Everest Finance Company Limited	AEFL	780,000	100	78,000,000
43	Nepal Bangladesh fin. & Leasing	NBFL	500,480	100	50,048,000
44	United Finance Ltd	UFL	750,000	100	75,000,000
45	International Leasing & Fin. Co.	ILFC	1,440,000	100	144,000,000
46	Shree Investment Finance Co. Ltd	SIFC	840,000	100	84,000,000
47	Central Finance Co. Ltd.	CFCL	780,000	100	78,000,000
48	Nepal Shree Lanka Merchant Bank	NSLMB	1,000,000	100	100,000,000
49	Premier Finance Co. Ltd	PFCLL	475,200	100	47,520,000
50	Nava Durga Finance Co.Ltd.	NDFL	455,948	100	45,594,800
51	Butwal Finance Ltd	BFL	696,721	100	69,672,100
52	Janaki Finance Ltd.	JFL	400,000	100	40,000,000
53	Standard Finance Ltd.	STFL	1,452,000	100	145,200,000
54	Om Finance Ltd.	OFL	700,000	100	70,000,000
55	Cosmic Mer.Bank & Fin.	CMBF	750,510	100	75,051,000
56	Fewa Finance Co. Ltd.	FFCL	700,000	100	70,000,000
57	KIST Merchant Banking & Finance Limited	KMBF	2,000,000	100	200,000,000
58	World Merchant Bank Ltd	WMBF	720,000	100	72,000,000
59	Birgunj Finance Ltd	BJFL	726,000	100	72,600,000
60	Capital Mer. Bamk & Fin	CMB	3,461,500	100	346,150,000
61	Everest Finance Ltd,	EFL	200,000	100	20,000,000
62	Prudential Bittiya Sans	PFIL	1,000,000	100	100,000,000
63	Shrijana Finance(Bittiya Sa	SFFIL	140,000	100	14,000,000
64	Royal Mer. Bank.& Fin	RMBFI	604,121	100	60,412,100
65	Guheyshwori Mer. Bank. Fin	GMFIL	616,813	100	61,681,300
66	IME Financial Institution	IMEFI	1,000,000	100	100,000,000
67	Bhajuratna Fin.& Sav. Co. Ltd.	BFIL	385,000	100	38,500,000
68	Patan Finance Ltd.	PFLBS	500,000	100	50,000,000
69	Imperial Financial Inst. Ltd.	IFIL	500,000	100	50,000,000
70	Civil Merchant bittya sanstha	CMBSL	500,000	100	50,000,000
71	ICFC Bittya Sanstha Ltd.	ICFC	2,997,416	100	299,741,600
72	Lord Buddha Financial Institutional Limited	LBFIL	750,000	100	75,000,000
73	Sagarmatha Merchant Banking & Finance Limited	SMBF	500,000	100	50,000,000
74	Nepal Express Finance Limited	NEFL	800,000	100	80,000,000
75	Kuber Merchant Bittiya Sanstha	KMBSL	500,000	100	50,000,000

	Limited				
7	Prabhu Finance Company Limited	PRFL	1,600,000	100	160,000,000
77	Yak and Yeti Hotel Ltd.(Ord.)	YHL	2,209,208	100	220,920,800
78	Soaltee Hotel Ltd.	SHL	8,697,187	10	86,971,870
79	Taragaon Regency Hotel	TRH	7,449,875	100	744,987,500
8	Oriental Hotel Ltd.	OHL	5,000,000	100	500,000,000
81	Bottlers Nepal Ltd.(Balaju)	BNL	1,948,887	100	194,888,700
82	Nepal Lube Oil Ltd.	NLO	203,936	100	20,393,600
83	Nepal Vanaspati Ghee Udhyog Ltd	NVG	101,250	100	10,125,000
84	Raghupati Jute Mills Ltd.	RJM	1,806,966	100	180,696,600
85	Butwal Spinning Mills Ltd.	BSM	1,306,693	100	130,669,300
86	Gorakhakali Rubber Udhyog Ltd.	GRU	3,833,400	75	287,505,000
87	Jyoti Spinning Mills Ltd (ord.)	JSM	1,270,288	100	127,028,800
88	Arun Vanaspati Udhyog Limited	AVU	550,343	100	55,034,300
89	Bottlers Nepal (Terai)Ltd.	BNT	1,210,000	100	121,000,000
90	Harisiddhi Brick and Tile Fac.Ltd.	HBT	18,650,000	10	186,500,000
91	Birat Shoe Ltd.(Ord.)	BSL	165,000	100	16,500,000
92	Uniliver Nepal Ltd.	UNL	920,700	100	92,070,000
93	Nepal Khadya Udhyog Ltd.	NKU	90,000	100	9,000,000
94	Shree Bhrikuti Pulp& Paper Ltd	SBPP	3,500,000	100	350,000,000
95	Fluer Himalayan Limited	FHL	262,102	75	19,657,650
96	Shree Ram Sugar Mills Ltd	SRS	3,045,990	100	304,599,000
97	Nepal Bitumin and Barrel Udyog	NBBU	210,680	100	21,068,000
98	Himalayan Distillery Ltd.	HDL	4,130,000	100	413,000,000
99	Nepal Film Dev.Co. Ltd.	NFD	491,285	100	49,128,500
100	Nepal Doorsanchar Company Limited	NTC	150,000,000	100	15,000,000,000
101	National Hydro Power Co.	NHPC	7,000,000	100	700,000,000
102	Butwal Power Co. Ltd.	BPCL	8,390,577	100	839,057,700
10	Chilime Hydro power Co.	CHCL	7,296,000	100	729,600,000
104	Salt Trading Corporation	STC	247,777	100	24,777,700
105	Bishal Bazar Co. Ltd.	BBC	491,400	100	49,140,000
106	Nepal Trading Ltd.	NTL	50,000	50	2,500,000
10	Nepal Welfare Company Ltd.	NWC	41,000	50	2,050,000
108	Nepal Insurance Co.Ltd.	NICL	1,026,984	100	102,698,400
109	Rastriya Beema Sansthan	RBS	995,138	100	99,513,800
110	National LifeInsu. Co.Ltd.	NLICL	300,000	100	30,000,000
111	Himalayan Gen.Insu. Co.Ltd.	HGI	630,000	100	63,000,000
112	United Insurance Co.(Nepal)Ltd.	UIC	600,000	100	60,000,000

113	Everest Insurance Co. Ltd.	EIC	900,000	100	90,000,000
114	Premier Insurance co. Ltd.	PIC	300,000	100	30,000,000
115	Neco Insurance Co.	NIL	550,000	100	55,000,000
116	Alliance Insurance Company Limited	AIC	599,862	100	59,986,200
117	Sagarmatha Insurance Co.Ltd	SIC	785,400	100	78,540,000
118	NB Insurance Co. Ltd.	NBIL	1,000,000	100	100,000,000
119	Nepal Life Insurance Co. Ltd.	NLIC	3,000,000	100	300,000,000
120	Life Insurance Co. Nepal	LICN	2,500,000	100	250,000,000
121	Prudential Insurance Co.	PICL	1,000,000	100	100,000,000
122	Lumbini General Insurance	LGIL	1,250,000	100	125,000,000
123	Shikhar Insurance Co. Ltd.	SICL	1,250,000	100	125,000,000
12	Siddhartha Insurance Limited	SIL	1,000,000	100	100,000,000
125	Nepal Industrial Dev. Corp.	NIDC	2,978,784	100	297,878,400
126	Nepal Development Bank	NDB	3,200,000	100	320,000,000
127	Nirdhan Utthan Bank Ltd.	NUBL	790,721	100	79,072,100
128	Chhimek Vikash Bank Ltd.	CBBL	510,000	100	51,000,000
129	Paschimanchal Bikash Bank	PDBL	1,000,000	100	100,000,000
130	Infrastructure Development Bank Limited	IDBL	800,000	100	80,000,000
131	Diprox Development Bank	DDBL	174,000	100	17,400,000
132	Gandaki Dev. Fin. Inst.	GDBL	500,000	100	50,000,000
133	Business Development Bank Ltd.	BDBL	2,100,000	100	210,000,000
134	Bhrikuti Vikash Bank Limited	BBBL	587,559	100	58,755,900
135	Sanima Vikash Bank Ltd.	SBBL	3,840,000	100	384,000,000
136	Narayani Industrial Dev. Bank	NABBC	200,000	100	20,000,000
137	Bageshowori Dev.Bank	BBBLN	330,000	100	33,000,000
138	Sahayogi Vikas Bank	SBBLJ	200,000	100	20,000,000
139	Gurkha Development Bank	GDBNL	4,800,000	100	480,000,000
140	Annapurna Bikash Bank Limited	ABBL	600,000	100	60,000,000
141	Swabalamwan Bikash Bank	SWBBL	250,000	100	25,000,000
142	Ace Development Bank Limited	ACEDBL	4,160,000	100	416,000,000
143	Himchuli Bikash Bank Ltd.	HBBL	900,000	100	90,000,000
144	Malika Bikash Bank Limited	MDBL	500,000	100	50,000,000
145	Siddhartha Development Bank Limited	SDBL	1,075,725	100	107,572,500
146	Biratlaxmi Bikash Bank Limited	BLDBL	500,000	100	50,000,000
147	Excel Development Bank Ltd.	EDBL	200,000	100	20,000,000
148	Nepal Development & Employment Promotion Bank Limited	NDEP	3,200,000	100	320,000,000

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