

A FUNDAMENTAL ANALYSIS OF STOCK RETURNS IN NEPAL

A Thesis

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By:

Rita Gurung

Roll No.: 17/062

Exam Roll No.: 6641

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RECOMMENDATION

This is to certify that the thesis

Submitted by:

Priti Singh

Entitled:

A Fundamental Analysis of Stock Returns in Nepal

has been prepared as approved by this department in the prescribed format of faculty of management. This thesis is forwarded for examination.

Prof. Dr. Radhe S. Pradhan

Thesis Supervisor

Prof. Dr. Puskar Bajracharya

Chairman of Research
Committee

Mr. Nar Bahadur Bista

Principal

Date:

VIVA-VOCE SHEET

We have conducted the VIVA-VOCE examination of the this thesis

Submitted by

Priti Singh

Entitled

A Fundamental Analysis of Stock Returns in Nepal

and found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the degree of

Master of Business Studies (M.B.S.)

VIVA-VOCE COMMITTEE

Chairman (Research Committee)

Member (Thesis Supervisor)

Member (External Expert)

Member (Global College of Management)

Date:

DECLARATION

I hereby declare that the work report in this thesis entitled, **A Fundamental Analysis of Stock Returns in Nepal** submitted to Global College of Management is my original work done in the form of partial fulfillment of the requirement for the Masters of Business Studies (M.B.S.) under the supervision of **Prof. Dr. Radhe S. Pradhan** of Global College of Management, Mid Baneshwor.

Date: September 2009

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Priti Singh

Roll No.: 17/062

Exam Roll No.: 6641

T.U. Regd. No.: 7-2-327-670-2002

Global College of Management

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LIST OF ABBREVIATIONS

AMEX	American Stock Exchange
AFC	Annapurna Finance Co.Ltd.
B/M	Book-to-Market equity ratio
BFL	Butwal Finance Ltd
BFL	Paschimanchal Finance Co. Ltd
BNL	Bottlers Nepal Ltd.(Balaju)
BNT	Bottlers Nepal (Terai)Ltd.
BOK	Bank of Kathmandu Limited
C/P	Cash Flow Yield
CAPM	Capital Asset Pricing Model
Cov.	Covariance
DPS/MPS	Dividend per Share to Market Price Per Share
E/P	Earning Price Ratio (Earning Yield)
EBL	Everest Bank Ltd
GFCL	Goodwill Finance Co. Ltd.
HBL	Himalayan Bank Ltd.
HGI	Himalayan Gen.Insu. Co.Ltd.
IRR	Internal Rate of Return
KBL	Kumari Bank Ltd
LBL	Laxmi Bank Limited

LFLC	Lumbini Finance Ltd.
LS	Size
MBL	Machhachapuchhre Bank Ltd
ME	Market Value of Equity
NABIL	Nabil Bank Ltd.
NCM	NIDC Capital Markets Ltd.
NDB	Nepal Development Bank
NEPSE	Nepal Stock Exchange
NFC	National Finance Co. Ltd.
NFL	Narayani Finance Limited
NHFCL	Nepal Housing Finance Ltd
NIB	Nepal Investment Bank Ltd.
NICB	Nepal Industrial & Co.Bank
NIL	Neco Insurance Co.
NSM	Nepal Share Markets Ltd.
NYSE	New York Stock Exchange
OHL	Oriental Hotel Ltd.
PFL	Pokhara Finance Ltd.
PIC	Premier Insurance co. Ltd.
SBI	Nepal SBI Bank Limited
SBL	Siddhartha Bank Limited
SCB	Standard Chartered Bank Ltd.
SCBNL	Standard Chartered Bank Nepal Ltd.

SEBO/N	Security Board of Nepal
SFC	Samjhana Finance Co. Ltd.
SFL	Siddhartha Finance Limited
SHL	Soaltee Hotel Ltd.
SIC	Sagarmatha Insurance Co.Ltd
TRH	Taragaon Regency Hotel
TSE	Tokyo Stock Exchange
UIC	United Insurance Co.(Nepal)Ltd.
UNL	Uniliver Nepal Ltd.
β	Beta Coefficient

CHAPTER I

INTRODUCTION

1.1 General Background

Stock performance has always been an interest to investors or any individuals involved directly or indirectly with market activity and performance. The stock returns, market behavior and price movement are always sensitive to the fundamental changes and, therefore can have an effect on their wealth. Furthermore, because of its dynamic in nature, stock performance has drawn the attention of economists, both for theoretical and empirical reasons since it influences the country's growth and development in long term period as well as a mirror of the country's economic current activities in short term period.

The study of stock return occupies an important place in financial management and it plays vital role in in the development of stock market. Development and expansion of financial market are essential for the economic growth of the country. Financial market helps economic development by mobilizing long-term as well as short-term capital needed for the productive sectors. The financial markets are the places where the financial assets are traded for the purpose of transformation of savings (Mahat: 1981, 25) stock market is a part of financial market where different stocks are traded. It serves as a link between suppliers and users of capital funds. Stocks are issued first in the primary market by private and government sectors to meet their long-term capital requirements and they are traded in the secondary market to generate liquidity, profitability, diversification and risk minimization purposes. It is mechanism for the mobilization of public savings and channelizing them in productive investments (Gupta : 1978, 325). Thus, stock market works as a powerful media between potential investors and users of finance.

There has been considerable evidence that the cross-section of average returns are related to firm-level characteristics such as size, earnings/price, cash flow/price, dividend/price, book-to-market equity, leverage, momentum both in the United States and in developed and emerging markets around the world. Measured over long sample periods, small stocks earn higher average returns than large stocks. [Reinganum (1981), Keim (1983), Kato and Schallheim (1985), Hawawini and Keim (1995) Heston, Rouwenhorst and Wessels (1995)].Studies of different stock markets demonstrate the significant relations between stock returns and several

fundamental variables. Some of these variables explain stock returns better than beta. For instance, Basu (1975, 1977, and 1983) found that stocks with low price-earnings ratios (P/Es) have higher average returns than stocks with high P/Es. Banz (1981) demonstrates that stocks of firms with small market value of equity (MVE) have higher beta-adjusted returns than stocks of larger firms. Bhandari (1988) asserts that stock returns are also positively related to debt-equity ratios (D/Es). Fama and French (1992) indicate that the book-market ratio (B/M) has the strongest relation with expected stock returns in the United States. Furthermore, B/M and MVE combine to capture the explanatory power of the earnings-price ratio (E/P), financial leverage, and beta for stock returns. In another study, Fama and French (1993) provided economic rationales for their findings by showing that B/M and MVE substitute for stock returns' sensitivity to risk factors and that these variables are also related to earnings. Barbee et al., (1996) suggest that the sales- price ratio (S/P) is a more reliable indicator of firms' relative market valuation than P/E or B/M because different accounting methods for depreciation and inventory affect earnings and book value of equity but not sales. They state that unlike P/E and B/M, S/P is also a meaningful measure of value for all stocks because it cannot be negative. They found that S/P absorbs the roles of B/M, MVE, and D/E in explaining U.S. stock returns during the 1979-91 periods. Nowadays, evidence is emerging on relations between stock returns and fundamental variables in international markets. Chan et al. (1991) show that expected stock returns in Japan are positively related to B/M and cash flow yield. Capaul et al., (1993) presented evidence that high value B/M stocks earn higher returns than low growth B/M stocks in France, Germany, Japan, Switzerland, the United Kingdom, and the United States. Roll (1995) reported that in Indonesia, the mean daily return is 0.1218 percent higher for high-B/M stocks than for low-B/M stocks, although this difference is not statistically significant because of a large degree of noise in the returns. Mukherji et al. (1997) study indicates that Korean stock returns are positively related to B/M, D/E, and S/P and negatively related to MVE. Their results demonstrate that for Korean stocks, B/M and S/P are more reliable measures of fundamental value than E/P and assert that D/E is a more consistent substitute for risk than beta. They also found evidence of greater leverage and smaller size result in higher returns for both value and growth stocks. Based on these studies, this study focuses on the relation between fundamental variables and stock returns in Nepalese Market.

When we take a look at the evolution of the asset pricing models, it was first in 1960s that the finance world met an extensive theory on the issue, the single period, mean-variance (MV) efficient capital asset pricing model (the CAPM), proposed by Treynor (1961), Sharpe

(1964), Lintner (1965), Mossin (1966) and Black (1972). The model proposed a simple, yet elegant linear relation between the cross-section of returns and the sensitivity of individual stock returns to changes in the market portfolio return, beta. The simplicity and theoretical appeal of the model proposed by CAPM is yet unmatched; however, many simplifying assumptions were made in the derivation of CAPM. One of the basic premises of the model that the market betas were the only measure of risk needed to explain the cross-section of expected stock returns. The capital asset pricing model (CAPM) assumes that investors consider only systematic risk, measured by beta. The model predicts a positive relation between stock returns and beta has been rejected by a good number of empirical tests such as Banz (1981), Basu (1977), Bhandari (1988), Fama and French (1992, 1993, 1995).

In many situations, the economic environment is sufficiently complex that decision makers are uncertain about the impact of their decisions. For instance, a legislature may be uncertain about the economic effect of proposed emission controls. Likewise, investors may be uncertain about the consequences of investing in a particular stock with their savings. In these situations, decision makers often turn to experts for advice and guidance. A key difficulty facing the decision maker is that the motives of the expert providing advice may not be transparent. This situation commonly arises in the interaction between investors and financial research analysts.

Thus, fundamental variables are an important source of information in determining stock market returns and useful to investors and other market participants in deciding their investment strategies.

1.2 Statement of the Problem

Since the early 1970's, numerous studies on the stock market have been conducted with most focusing based on stock returns because it is important to both investors and business organizations to know what influences their investment returns and company stock value. Among the factors that are considered more dividend price ratio; Campbell and Shiller (1988, 1998), Lo and McKindley (1988), Poterba and Summers (1988); price earning (P/E) ratio, Basu (1975) and Lamont (1998); dividend yield, Fama and French (1988), Goetzmann and Jorion (1993), Hodrick (1992) and Kothari and Shanken (1992); and exchange rates, Ma and Kao (1990), Ajayi and Mougoue (1996), and Nieh and Lee (2001).

Although many previous empirical studies have investigated the relationship between stock returns and fundamental ratios such as P/E ratio, dividend yield and book-to-market ratio, the results are ambiguous.

Among the various empirical contradictions, the cross-sectional relation between stocks returns and fundamental variables has been studied extensively in US, Japan, and other developed countries. However, can the same fundamentals that help explain in developed countries will affect stock prices in under developed country like Nepal, with its very different environment?

In general, a positive relationship has been observed between stock returns and earnings yield, cash flow yield and book to market ratio, and negative relationship has been found between stock returns and size. Voluminous studies that documented the size and the earnings yield effects studies that try to disentangle the two effects (for example, Basu (1997, 1983), Banz (1981), Reinganum (1981), Cook and Rozeff (1984), Lakonishok and Shapiro (1986) Banz and Breen (1986), Jaffe, Keim, and westerfield (1989), and Ritter and Chopra (1989).

The shortcomings of accounting earnings have motivated a number of recent papers to explore the relationship between cash flow yields and stock returns Bernard and stober (1989), and Wilson (1986)). They observed more significant positive relationship of stock returns with cash flow yield than that of earnings yield. Rosenberg, Reid, and Lanstein (1984), studied the relationship between stock returns and the book to market ratio they found most significant positive relation between stock returns and book to market ratio. The selection of such fundamental variables has been guided more by any explicit theoretical model. Ball (1978), Fama (1991) and Fama and French (1998), have suggested reasons why such variables might help to predict returns. In particular, yield surrogates such as the earnings yield and the dividend yield are correlated with returns because they proxy for underlying risks not otherwise accounted for by traditional measures such as betas.

Accordingly, as Fama (1991) pointed out, any correlation observed between fundamental variables and returns could be consistent with market inefficiencies or with the fundamental variables proxying for omitted risk factors. The joint hypothesis nature of the problem prevents an unambiguous resolution of whether the predictability of returns, either overtime or cross-sectionally, is a result of market inefficiency or not. Nonetheless, documenting such

predictability for whatever reason may still be useful. For example, it may lead to better understanding of the behavior of security prices, and in making financial investment decisions.

In addition, evidence from the Japanese market helps to shed further light on whether one fundamental variable (e.g. earning yield) subsumes another(e.g..size) and on whether the results are robust to time period and sample composition . Academic interest in the Japanese market is a relatively recent phenomenon. Hamao (1991), Hamao and Jb botson (1989), characterized Japanese capital markets by presenting summary statistics. Tests of various assests pricing theories were carried out by Maru and yanezawa (1984), Hawawini (1991), Elton and gruber (1988), Hamao (1988), Brown and Otsuki (1990), Gultekin and penati (1989), Campbell and Hamao (1991), and Hamao, Masulis, and Ng (1990), have investigated the extent of integration between the Japanese and other national stock markets.

In addition, the information content of the realization of accounting reports has been examined by sakakibara, Yamaji, Sakurai, Shiroshita, and Fukuda (1988), and Darrough and Harris (1991), Elton and Gruber (1989), analyzed the relationship between expectational data and actual stock performance. The difference between U.S. and Japanese P/E multiples has been examined by Bildersee, cheh, and Lee (1990), and French and poterba (1990). Finally, daily and intraday patterns in index returns were studied by Jaffe and Westerfield and Kato and schallheim (1985), documented size and seasonal anomalies, while Nakamura and Terada (1984) and Aggrawal, Rao, and Hiraki (1986), documented P/E and size effects.

The findings reveal a significant relationship between fundamental variables and expected returns in the Japanese market. Of the four variables considered, the book to market ratio and cash flow yield has a reliably positive impact on expected returns. The performance of the size variable, although in general consistent with previous findings, turns out to be highly dependent on the specific model and time period. While previous studies documented a strong positive earnings yield effect, it would be relevant to examine such effect in the context of Nepal.

Several studies have documented the ability of certain variables to explain the cross-sectional variation in the stock returns. In developed countries, the cross-sectional relationship between the stock returns and different fundamental variables have been extensively studied. Among them, Stattman and Rosenberg, Reid and lanstein (1985) have found that average returns on

US stocks were positively related to the ratio of a firm's book value of common equity, BE, to its market value, ME. Chain, hamao, and Lakonishok (1991) analyzed the relation of earnings yield, size, book to market ratio, and cash flow yield with the expected stock returns. Their findings revealed significant relationship between these variables and expected returns. Of the four variables considered, book to market ratio and cash flow yield have the most significant positive impact on expected returns. Negative relationship between leverage and average returns were found by Bhandari (1988).

A study by Banz (1981) documented that size (market equity) determines the average returns. Stocks with larger market equity have lower average returns and the stocks with smaller market equity have higher average returns in other words, his study revealed negative relationship between size and average returns. The size effects became weaker when beta and expected returns were allowed to vary over time. And Wiggins (1991) also documented that market adjusted stock returns are directly related to E/P and they have positive relationship. Similarly, verma (1994) founded positive relation between profitability and dividends. The general conclusion that emerges from the above mentioned studies is that stock returns are explained and determined not only by a single factor rather this is the function of different interdependent variables. However, pertinent question arises as to what extents these findings are comply in underdeveloped capital markets. A number of studies have been conducted on the fundamentals for stock returns in developed and big capital markets but their relevance is yet to be seen in the Context of smaller and underdeveloped capital markets. The fundamental analysis of stock returns in smaller and under-developed capital markets is thus one of the important areas of the study in finance.

In Nepal, the listing of shares in NEPSE and their trading in the stock market is a recent phenomenon. The Nepalese stock market is characterized by a low trading volume, absence of professional brokers, early stage of growth, limited movement of share prices, and limited information available to investors. A number of studies are available on government owned public enterprises but studies on enterprises whose stocks are listed in NEPSE and traded in stock market are yet to come up in Nepal. Viewed in this way, this study is expected to provide at least some insight into the fundamentals of stock returns in Nepal. This study can be considered important as Nepal has already started the process of privatization of public or government owned enterprises.

In the context of Nepal, Pradhan (1993) attempted to verify some of the above mentioned results for the first time in Nepal. His study mainly indicated that stock paying higher dividends has higher liquidity, lower leverage; higher earnings, higher turnover and higher interest coverage. Manandhar (1998) also made efforts to test the impact of some of the above mentioned different variables. His study indicated dividend per share has positive relation with market capitalization but dividends yield has negative relation with market capitalization. All these studies attempted to find the impact of different fundamental variables on dividends and dividend yield. It is still relevant to estimate and verify the above mentioned relation in the present day context since the condition of securities market has changed significantly after the completion of these studies by incorporating some additional variables. The effect of different financial variables on capital gain yield and total yield by using more recent data has been corrected more important to analyze, but there is not any study available to explain the above mentioned relationships.

This study will deal with the following issues:

1. What are the relationships of stock returns (i.e., dividend yield, capital gain yield and total yield) with fundamental variables (i.e., size, book-to-market equity ratio, earning to price and cash flow yield)?
2. Are there equal contributions of earnings yield and cash flow yield in predicting stock returns? If not what could be the reason for the discriminations?
3. What are the roles of size and book to market equity ratio in explaining the stock returns?
4. Do the companies having high earnings yield have higher stock returns? Is there any relationship between earnings yield and stock returns?
5. Do the large sized companies have higher stock returns? Is there any relationship between size and stock returns?
6. Do the companies with higher book to market equity ratio have higher stock returns? Is there any relationship between book to market equity ratio and stock returns?
7. Do the companies having higher cash flow yield have higher stock returns? Is there any relationship between cash flow yield and stock returns?

8. What kinds of relationship exist among earnings yield, size, book to market equity ratio and cash flow yield?
9. Do the companies having higher dividend yield have higher total yield? What kinds of relationship exist between dividend yield and total yield?
10. Do the companies having higher capital gain yield have higher total yield? What kinds of relationship exist between capital gain yield and total yield?

1.3 Objective of the Study

The major objective of this study is to analyze the relationship of stock returns with the underlying behavior of fundamental variables in the context of Nepal. The specific objectives are as under:

1. To analyze the relation between fundamental variables and expected returns in Nepal.
2. To examine if dividend yield, capital gain yield, and total yield are related to earnings yield, size, book to market ratio and cash flow yield.
3. To measure the effect of fundamental variables on stock returns of the companies.
4. To evaluate the role of yields and earning to price ratio on stock returns.
5. To conduct a survey of financial executives on the effect of yields, earning to price and size on stock returns.

1.4 Organization of the Study

The study shall be organized into five parts, each devoted to some aspects of the study on fundamental analysis on Nepalese stock returns. The titles of each of these parts are as follows:

- | | |
|------------|-------------------------------------|
| Part One | : Introduction |
| Part Two | : Literature Review |
| Part Three | : Methodology |
| Part Four | : Presentation and analysis of data |
| Part Five | : Summary and conclusions. |

The rationale behind this kind of organization is to follow a simple research methodology approach. The contents of each of the parts of this study are briefly mentioned here.

Part one will explain the introductory chapter of the study. This chapter describes the major issues to be investigated along with the objectives of the study.

Part two shall contain the review of related literature which has been organized into four chapters. It describes conceptual framework, the review of related studies in general and related to Nepalese context and finally concluding remarks of the literature.

Part three will describe the methodology employed in the study. This chapter deals with research design, nature and sources of data, selection of enterprises, method of analysis, limitations of the study, and definition of key terms.

Part four will consist of three sections. Section 1 examines the role and impact of fundamental variables on dividend yield, capital gain yield and total yield. The analysis of summary statistics for portfolios sorted by fundamental variables has been described in section 2 while section 3 analyzed the properties of portfolios formed on dividend yield, capital gain yield and total yield of Nepalese enterprises.

Lastly, part five shall be devoted to summary and conclusion of the study. This Chapter presents major findings. It also offers recommendations with future avenues.

1.5 Research Methodology

Research is a systematic and organized effort to investigate a specific problem that needs solution. Methodology refers to various steps that are generally adopted by a researcher in studying this research problem along with the logic behind it. Thus, research methodology is a way to systematically solve the research problem, what we are doing at present.

Both descriptive and analytical types of research will be employed to fulfill the objective of research work. Primary sources of data were questionnaire with officials.

Nature and Sources of Data

This study will be based on both secondary data and primary data. The necessary data and information shall be collected from various sources covering a period of 10 years, i.e., from F/Y1998/99 to 2008/09 from the website of SEBON:<http://www.sebonp.com> to analyze the

relationships among different variables, this study shall be used pooled cross-sectional data of 38 enterprises with 268 observations for the period of 1998/99 to 2008/09. The balance sheet of selected enterprises provides the information on market value of equity, book value of equity, fixed assets, long term debt, total debt, net worth and other related variables. Similarly, profit and loss account provides dividends, net profit, cash flow amount and interest expenses and other statements provide share price, total capitalization, number of share outstanding etc. Then various ratios and variables have been computed as required for the study.

Method of Analysis

Analysis is the careful study of available facts so that one can understand and draw conclusion from them on the basis of established principles and sound logic '(Cattle, 1988). The statistical techniques of regression analysis, both simple and multiple, linear and non-linear will be employed to a number of cases. Various statistical tools shall be used to confirm the relationship between stock returns and fundamental variables and to test the robustness of the results. The empirical results shall be extracted in this study by using annual data of listed companies from 1997/98 to 2008/09.

(a) The Econometric Models

The study, among others, attempts to estimate various econometric models to confirm the relationship between stock returns and fundamental variables and to test the robustness of the results. The alternative statistical specifications are also attempted in each case where necessary in order to obtain the best possible results. The study examine the relationship of stock returns (R) such as dividend yield, capital gain yield and total yield with fundamental variables such as, earnings yield (E/P), size $\ln(ME)$, book to market equity ratio (B/M) and cash flow yield(C/P), of Nepalese enterprises by estimating various models. The theoretical statement of the models is that the stock returns (R) may be regarded as subject to the constraints of earnings yield (E/P), size $\ln(ME)$. Book-to-Market equity ratio (B/M) and cash flow yield (C/P). The theoretical statement may be frame as under:

$$R = f(E/P, \ln(ME), B/M, C/P)$$

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

$$R = a + b_1 (E/P) + b_2 \ln (ME) + b_3 (B/M) + b_4 (C/P) + U_i$$

Where, dependent variable, R chosen for the study has been specified as under:

DY = Dividend yield or dividend per share to market price per share i.e. D_1/P_0 .

CY = Capital gain yield or, capital gain per share to market price per share i.e. $(P_1 - P_0)/P_0$

TY = Total yield or dividend per share plus capital gain per share to market price per share i.e. $\frac{(D_1 + P_1 - P_0)}{P_0}$

The independent variables are specified as under:

E/P = Earnings yield or earning per share to market price share.

$\ln (ME)$ = Size or natural logarithm of market capitalization.

(B/M) = Book value of equity per share to market value of equity per share.

(C/P) = Cash flow yield or earning per share plus depreciation expenses per share to market price per share.

U_i = Distribution or error term.

(b) Method of Analyzing the Summary Statistics for Portfolios Sorted by Fundamental Variables

The summary statistics are studied to examine the relationship between stock returns (i.e., dividend yield, capital gain yield and total yield) and fundamental variables (i.e. earnings yield, size, book to market equity ratio and cash flow yield) of Nepalese enterprises. This study is conducted at a portfolio level based on pooled cross-section analysis of 38 enterprises with 268 observations. The study sorts out all the sampled securities into four portfolios. The summary statistics for portfolios have been sorted by earnings yield, size, and

book to market equity ratio and cash flow yield, viz., panel A, Panel B, Panel C, Panel D respectively.

The low to high ratios of different variables are provided in portfolios 1-4 for each panel. Forming more than four portfolios based on various ratios of fundamental variables would yield too few stocks per portfolio. In other words splitting stock into more than four portfolios reduces the sample sizes which would result the greater sampling error. For each portfolio, average ratios are computed.

In the first step, stocks are ranked by size in the table 3 and placed them into three groups. Group 1 contains stocks with size of less than 4.40 percent and accordingly group 2 and 3 each contains stocks ranked by increasing value of size. In other 5 tables, portfolios 1 to 3 are also formed according to the similar process.

(c) Statistical Tools

In the process of estimating above mentioned models in subsection A, various statistical tools have been used , e.g., coefficient of multiple determination(R^2), standard error of estimate (SEE), Student's t-statistics and F-statistics etc. in this study , the statistical parameters are calculated with the help of computer via SPSS for the models prescribed above. Brief explanations of statistical tools employed in this study are as follows:

Co-efficient of (Multiple) Determination (R^2)

The coefficient of multiple determinations is a measure of the degree (extent or strength) of linear association of correlation between two variables, one of which happens to be independent and other being depended variable(s). It measures the percentage total variation in dependent variable explained by independent variable (s). The value of the coefficient of multiple determination can range from zero to one (i.e. $0 \leq R^2 \leq 1$). If R^2 is equal to 0.90, it indicates that independent variables used in regression model explain 90 percent of the total variation in the dependent variable. A value of one can occur only if the unexplained variation is zero, which simply means that all the data points out in the scatter diagram fall exactly on the regression line. It is calculated as :

$$R^2 = \frac{\text{Explained Variation}}{\text{Total Variation}}$$

Statistics

It is used to test the validity of assumption if the sample size is less than 30. The computed value of 't' is compared with the table value of 't' at certain level of significance for given degree of freedom. If the calculated value of 't' is greater than its table (critical) value, the difference is treated as significant at the level but if the calculated 't' value is less than its table value, we infer the difference is not significant. The computed 't' values are compared with its table values at 5 percent level of significance. To identify the significance of financial ratios with the stock returns, computed 't' values are compared with its table value at 5 percent, level of significance.

Regression Constant (a)

It is also known that the numerical constant which determines the distance of the fitted line directly above or below the origin (i.e., Y-intercept). The value of the constant, which is 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 the entire variable omitted from the model.

Regression Coefficients (b₁, b₂, b₃.....)

The regression coefficient of each independent variable indicates the marginal relationship between that variables and value of dependent variable, holding constant effect of all other independent variables in the regression model. In other words, the coefficients describe how changes in independent variables affect the values of dependent variable's estimate. It is also known that the numerical constant which determines the change in dependent variable per unit change in independent variables (i.e. slope of line).

Standard Error of Estimate (SEE)

With the help of regression equations perfect prediction is practically impossible. Standard

error of an estimate is a measure of reliability of the estimating equation, indicating the variability of the observed points around of 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 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 is as a description of the average relationship between two series.

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 degree of freedom. It is clear that F-distribution has a single mode. Not that 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 sometimes called variance ratio test, is based on F-distribution. In order to test goodness of fit of the regression models, F test is used.

1.5 Limitations of the Study

The data problem is acute in Nepal. Even the financial statements of the companies published by them are not readily available since they are treated as confidential.

In order to make a study on fundamental analysis of Nepalese stock returns more fruitful, it is essential that data should be of frequent time intervals. Here again, such type of monthly or quarterly data could not be obtained and due to this study has been forced to use the annual data which are available in profit and loss accounts and balance sheets. The use of annual data in this study is thus likely to make the conclusions somewhat less valid and less reliable. In the absence of monthly or quarterly data, many of approaches to this study could also not be employed. Due to this cannot conduct the study like our base journal [Chan, Hamao and Lakonishok (1993)]. Nepal stock Exchange Ltd. publishes financial statements of some listed companies and it has also kept the financial statements and other information of some listed companies in its web site addressed <http://www.nepalstock.com> to avail and ease information regarding stock market. But data of all the listed companies are not still available. NEPSE Ltd. is also unable to provide the required data of listed companies from

the fear of listing. The same data provided by NEPSE Ltd., Securities Board, Nepal, and the individual companies sometimes also differ. It marks the accuracy and reliability of the data.

This study does not cover all the Nepalese companies. It, therefore, implies that the conclusions drawn are of a tentative nature and firm generalization should be avoided for the entire companies. Similarly, each of selected enterprises does not represent the entire industry in which it falls. But it does represent largely its industry groups. The study period begins from 1997/98 only. The earlier years are not considered as it will decrease the number of enterprises to be selected for this study. The regression results are based on pooled cross-section analysis of only limited observations for the selected enterprises. Besides that, the merits and demerits of various statistical tools employed also cannot be ignored in this study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Conceptual Framework

An investment can be defined as an initial outlay of funds to a set of return generating assets that will be possessed over some future time period. These assets can be real assets (e.g. commercial goods, real estate, gold), or financial assets (e.g. stocks, bonds, derivatives, mutual funds). Financial assets are paper or electronic claims on the earnings of the issuer, be it a corporation or a federal government. Capital assets [stocks and bonds] are one of the oldest, and, the most important elements of the market for financial assets.

Most of the investment decisions are based on future returns. Return is the motivating force in the investment process, i.e. it is the reward for undertaking the investment. Investment decisions that we make today, are based on expectation of returns in the future. The expected rate of return for any asset is the weighted average rate of return, using the probability of each rate of return as the weight (Francis: 1992, 11). It is based on the expected cash receipts (e.g., dividends or interest) over the holding period and the expected ending, or selling price. The expected rate of return is an ex-ante or unknown future return (Cheney and Mosses: 1993, 34). If the rate of return is guaranteed, most investors recognize that several rates of returns are possible. Investors summarize these possible rates of return into a single number called the expected rate of return.

If the investor can describes the possible variables that will influence each of the possible rates of return and assign probabilities to these outcomes. The expected rate of return should equal the weighted average of the various possibilities; Listing the possible investment results and assigning probabilities to each of these outcomes is the same as creating a probability distribution in statistics. Probability distributions are used to describe possible outcomes and to assign individual probabilities, from zero to one to each possible outcome. The expected

rate of return is calculated by summing the products of the rates of return and their respective probabilities.

$$E(r) = \sum_{t=1}^n P_t r_t$$

Where,

P_t = Probability distribution of rates returns

r_t = Rate of return

Van Horne (2000, 68) has proposed the CAPM developed by Markowitz(1959), the expected rate of return for the individual security linking with the risk coefficients. According to him, the expected return(R_j) for stock j is

$$R_t = R_f + (R_m - R_f)$$

Financial Performance

Stock returns are the results of different fundamental variables. Optimum combinations of these variables may generate maximum returns of the company. Companies having higher earnings may generate maximum returns of the company. Companies having higher earnings may be often regarded as high performed companies. Although there are various measures of performance evaluation, Performance evaluation could be defined as analysis of common stock (Davidson and weil: 1977, 411). Financial performance analysis can be considered as a heart of financial decision. The growth and development of any enterprise is directly influenced by the financial policies. Rational evaluation of financial performance of financial management is too much involved in record keeping, raising necessary funds and maintaining relationship with banks and other financial intuitions (W & B, 1996). Financial performance as the part of financial management is the main indicator of the success or failure of the firm. Financial condition of business firm should be sound from the point of view of shareholders debenture holders, financial institutions and nation as a whole.

Performance evaluation could be defined as analysis of common stock. Performance may be measured in terms of either the earning per share of common stock or rate of return earned on common stock (Cottle:1989). Performance variables measure the firm's economic and financial performances which are usually endogenous (Shim, and Siegel:1989,192). Opler and Titman (1994) also have measured the performance in terms of stock return, growth of sales and growth of profitability. This indicates higher value of market price per share, earning per share, dividend per share, growth of sales and Profitability reflects the better performance of companies.

Weston and Copeland (1992, 1991) examined performance measures in three groups: Profitability ratios, growth ratios, and valuation measures. The specific variables Profitability ratio explained by them are net operating income to sales, net operating income to total assets, net operating income to total capital, net income to sales, return on equity, marginal profitability rate and marginal return to equity. The growth rates of sales, net operating income, net income, earning per share, dividend per share used to measure growth ratio. Price earning, market value of equity to book value of equity, and dividend yield plus capital gain yield (Or shareholders' returns) were suggested as valuation measures of the companies. They also expressed that higher value of these variables indicate better performance.

Cottle (1960) analyzed the performance of consumer finance industry in U.S.A. in terms of earnings. This study measured the earnings to total investment ratio and compared this with other 33 industrial groups as a whole. Verma (1994) analyzed profits, dividends, fixed investments and borrowings to study the financial behavior of Jute industry in India. Income, Growth rate, Capitalization, number of companies, returns analyzed by Barown and Goetzmann (1995) to study the performance of mutual funds in U.S.A.

In context of Nepal Shrestha (1983) analyzed the performances of public enterprise in Nepal with the help of earning power ratio. From above, it is clear that performance is a vague term which can be measured with the help of different variables. Most of the variables are related to same aspect of earnings of the companies and the stock returns.

Financial analysis helps to know the financial performances of an enterprise. Financial analysis is the main quantitative judgment Process of identifying the financial strength and weakness of the firm by properly establishing the relationship between the items of balance sheet & profit loss account (Pandey, 1995). Financial analysis is a general term referring to the process of extracting and studying information in financial statements for use in management decision making, for example financial analysis typically involves the use of ratios comparison with prior periods and budget, and other such procedure (Ahuja,120).Financial appraisal is a scientific evaluation of the profitability and strength of any business concerns Jain(1995,36).Financial analysis seeks to spotlight the significant impacts and relationship concerning managerial performance, corporate efficiency, financial strength and weakness and creditworthiness of the company. The objective of financial analysis is a detailed cause and effect study of the profitability and financial position. The goal of such analysis is to determine the efficiency and performance of the firm's management, as reflected in the financial records and reports.

Financial statements analysis is one major tools of financial analysis. Financial statements are such records and reports which contain the data required for performance measurement. It is therefore important to analyze the financial statements to identify the strength and weakness of the company. Financial statements are the reports in which the accountant summarizes and communicates basic financial data. The financial statement provide a summary of the accounts of a business enterprise, financial statement is a collection of data organized according to logical and consistent accounting procedure(Hampton;1986,85) its purpose is to convey an understanding of some financial aspects of business firm.

Trend analysis is also one method of measuring performance. This analysis made for quite along period. It is essential that the analysis cover reasonably longer period. The analysis so made for quite a long period is trend as trend analysis. Trend analysis of ratio indicates the direction of change (Pandey; 1992, 51). This method involves the calculation of percentage relationship that each item bears to the same item in the base year. Trend percentages disclosed the changes in the financial and operating data between specific periods and make

possible for the analyst to form an opinion as to whether favorable or unfavorable tendencies are reflected by the data.

Comparative statement analysis is another method of measuring performance of company. It is used to compare the performance and position of the firm with the average performance of the industry or with other firms, such a comparison facilitates the identification of weakness and remedying the situation.

In financial analysis a ratio is used as an index of yard stick for evaluating the financial performance of the firm. It is one most important tool, analysis and interpretation of the various ratios should give an experienced and a skilled analyst a better understanding of the firm. Financial analysis depends to a very large extent on the use of ratios though there are other equally important tools of analysis. Ratio is an important tool of financial statement analysis. The relationship between two accounting figures expressed mathematically is known as financial ratio (Pandey, 1992).

It helps analysts to make quantitative judgments about the financial position and performance of the firm. It uses financial reports and data and summarizes the key relationships in order to appraise financial performance (Munakarmi; 2000, 3.8). Ratio analysis is such a powerful tool of financial analysis that through it economic and financial position of a business unit can be fully x-rayed. Ratios are just a convenient way to summarize. Large quantities of financial data and to compare firm performance. Performance ratio can provide insight into a firm's profitability, return on investment, capital adequacy, and liquidity (Clark 1999, 257)

Different analysts desire different types of ratios, depending largely upon who the analyst is and why the firm is being evaluated. Short term creditors hold obligations that will soon mature. And they are concerned with the firm's ability to pay its bills promptly. In the short run the amount of liquid assets determines the ability to pay off current liabilities. These persons are interested in liquidity. Long term creditors hold bonds or debentures mortgaged against the firm and are interested in current payment of interest and eventual repayment of principal. The firm must be sufficiently liquid in the short term and have adequate profits for the long

term. These persons examine liquidity and profitability. Stockholders, in addition to liquidity and profitability are concerned about the policies of firm that affect the market price of the firm's stock. Without liquidity, the firm could not pay cash dividends. Without profits, the firm could not be able to declare dividends with poor policies. The common stock would trade at low price in the market.

In this way different tools like Ratio analysis, Trend analysis, comparative analysis, Financial statement analysis are used to analyze the financial performance. It suggests that financial analysis helps to measure the performance of companies.

Returns

The return is the income or the appreciation in the value. In other words, return is the income received on investment. The amount, the invested money will earn is called the investment return. (SAB.1995; p.45). The major factor in the decision to consume now or to invest or consume later can be summarized by considering the after tax return relative to the risk over the investment horizon. Investment return is defined as the after tax increase in value of initial investment. The increase in value of assets can come from two sources: a direct cash payment to the investor or an increase in the market value of the investment relative to the original purchase price. The rate of return is the relative value of benefit on investment.

Shareholders expect two kinds of return from the purchase of common stock in the form of capital gains & dividends. Capital gain may be defined as the profit resulting from the sale of common stock. The shareholders expect an increase in the market value of common stock over time. Most of mature and stable enterprises declare some portion of earnings as a dividend. Investors also want regular dividend to be declared and paid on common stock. This expectation may take priority over the desire of the company management to retain earnings ploughing back for the expansion and growth of the company. "Since dividend would be more attractive to stockholders, one might think that there would be a tendency for corporations to increase distribution of dividends. But one might equally pressure that gross dividend would be reduced somewhat, with an increase in net after tax dividends still available to stock

holders, and increase in retained earnings for the corporation” (Trop: 1977, 90-91). Investors seek the maximization of dividends as well as stock price. “Financial management is, therefore, concerned with the activities if corporation that affect the well-being if stockholders. That well-being can be partially measured by the dividend received, but a more accurate measure is the market value of stock”. (Dean: 1973, 1)

Sharpe et al. (2000, 3) expressed that rate of return (or simply return) is the rate of change in wealth over a period of time. He suggested calculating returns as follows:

$$\text{Return} = \frac{\text{End of period wealth} - \text{Beginning of period wealth}}{\text{Beginning of period wealth}}$$

Return is measured over the single period or several (holding) periods. An investment’s single period rate of return, denoted r , is simply the total return an investor would receive during the investment period or holding period state as a percent of the investments price at the start of the holding period (Fransis: 1992, 1)

$$\text{I.e. } r = \frac{\text{Ending wealth} - \text{Beginning wealth}}{\text{Beginning wealth (or purchase price)}}$$

According to Francis: [1992, 2] an investor can obtain two kinds of income from an investment in a share of stock a bond.

- 1) Income from price apperception or, (losses from price deprecation). This quantity is denoted: $P_t - P_{t-1}$
- 2) Cash flow income from cash dividends or coupon interest payments, represented by the convection C_t .

The sum of these two sources of income or, (loss) equals the change in the interested wealth during any given holding period. The rate of return formula can be restated in a form appropriate for almost any investment.

$$\text{I.e. } r_t = \frac{\text{Price change} + \text{Cash flow (if any)}}{\text{Price at the beginning of the period}}$$

$$\text{Or, } r_t = \frac{(P_t - P_{t-1}) + C_t}{P_{t-1}}$$

The above formula can be expressed in the another form also

$$\text{Or, } r_t = \frac{(P_t - P_{t-1})}{P_{t-1}} + \frac{C_t}{P_{t-1}}$$

$$\text{Or, } r_t = \frac{(P_t - P_{t-1})}{P_{t-1}} + \frac{D_t}{P_{t-1}}$$

$$\text{Or, } r_t = CY = DY$$

Where,

r = rate of return during the t^{th} period

P_t = Market price at the end period t

P_{t-1} = Market price at the end period $t-1$

C_t = Cash flow income received during the t^{th} period

D_t = Dividend income received during the period of t .

CY = Capital gain yield, or price appreciation i.e. $\frac{(P_t - P_{t-1})}{P_t}$

DY = Dividend yield, i.e. $\frac{P_t}{P_{t-1}}$

Cheney and Moses [1993, 30] also expressed that the rate of return over the holding period is change in price plus cash receipts divided by beginning price. If the investment more than one year period, the rate of return is compute by Weston and Bringham (1996) as,

$$\text{Initial Purchase Price} = \frac{D_1}{(1+r)} + \frac{D_1}{(1+r)^2} + \dots + \frac{D_n + S_n}{(1+r)^n}$$

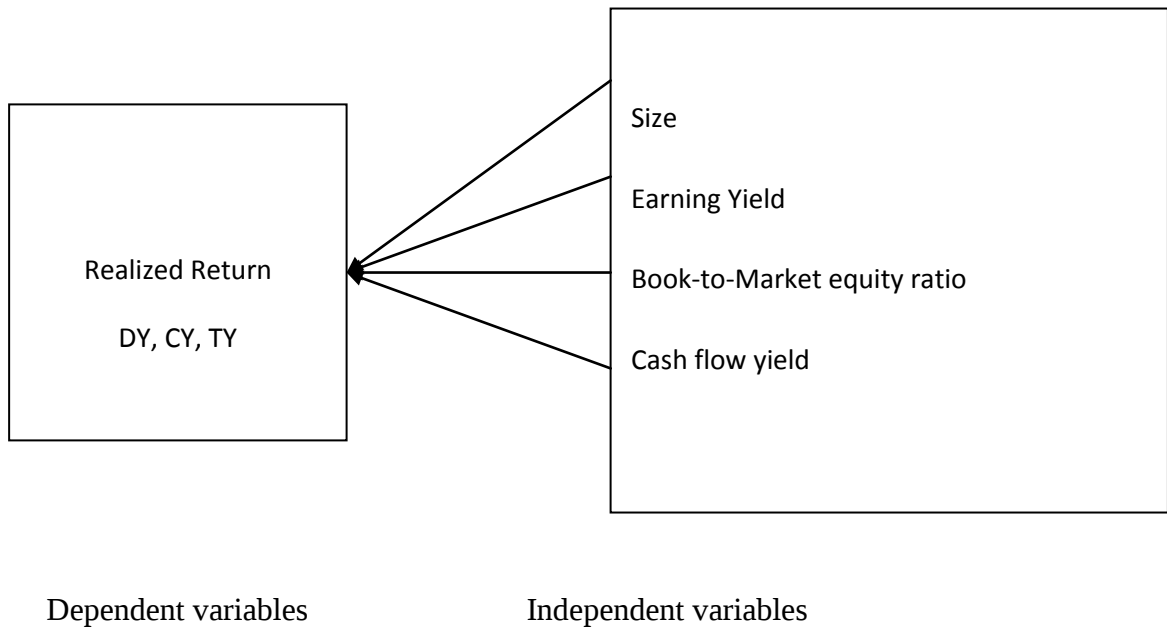
Where,

$R =$ IRR or discount rate or rate of return

$D_1, D_2, \dots, D_n =$ Year to year cash dividend and

$S_n =$ the terminal price realized on sale after n years (Gupta and Choudhary: 200, 357-364)

Therefore, the stock returns are annual benefits from stock investments. These constitute dividend yield, capital gain yield and total yield. Returns are mainly the results of earnings and cash flows. Besides that, returns are affected by various fundamental variables such as earning yield, size, book to market ratio, cash flow yield. These independent variables are used in an attempt to analyze. These independent variables along with dependent variable constitute a theoretical framework which is depicted.



Diagrams of fundamental variables

Expected rate of return

Investment decisions are based on expectations about the future. The expected rate of return for any asset is the weighted average rate of return, using the probability of each rate of return, as the weight. The expected rate of return is based upon the expected cash receipts (e.g. dividends or interest) over the holding period and the expected ending or selling price. The expected rate of return is an ex-ante, or unknown of future return (Cheney and Moses: 1993, 34). Unless the rate of return is guaranteed, most investors recognize that several rates of returns are possible. Investors summarize these possible rates of return into a single number called the expected rate of return.

If the investor can describes the possible variables that will influence each of the possible rates of return and assign each of the possible rates of return and assign probabilities to these outcomes, the expected rate of return should equal the weighted average if the various probabilities; Listing the possible investment results and assigning probabilities to each of these outcomes is the same as creating a probability distribution in statistics. Probability distributions are used to describe possible outcomes and to assign individual probabilities, from zero to one to each possible outcome. The expected rate of return is calculated by summing the products if the rates of return and their respective probabilities.

$$E(r) = \sum_{t=1}^n P_t r_t$$

Where,

P_t = Probability distribution of rates returns.

r_t = Rate of return

2.2 Review of Empirical Studies

The objective of this section deals with the empirical studies on effect of fundamental variables on stock returns. The relationship between fundamental variables and stock returns are explained.

There is no controversy as to the fact that stock returns are affected by the financial condition of firm. Theoretically, the performance of companies would depend, among others, upon the liquidity leverage, profitability, turnover, and interest coverage of the firm. Other variables also may explain the performance and stocks returns. All these variables and their role in stock returns may be seen from a review of some of the important empirical works undertaken in this section.

Studies on Stock Returns

In this section, the studies related to stock returns and its determinants are reviewed. A study by Reserve Bank of India (2001) analyzed the financial performance of selected 855 non-governments, non-financial large public limited companies in India in terms of growth rate of sales, value of production, and profits. The specific variables used to measuring the performance were growth of sales, growth of production, margin on sales, return on net worth, ordinary dividend rate, and growth rate of total assets.

Kathori and Warner (2001) analyzed the performance of mutual fund in USA in terms of risk adjusted return using the following model:

$$R_{Pt} - R_{ft} = \alpha_p + B_p (R_{Mt} - R_{ft}) + E_{pT}$$

Where,

R_{Pt} = Mutual fund portfolio return in month t.

R_{ft} = Risk free return in month t.

R_{Mt} = Return on market portfolio in month t.

E_{Pt} = White noise error terms

α_p , β_p = Regressions intercept and slope (beta risk) coefficients.

They also used size, book to market, and momentum matched return to measure performance.

Malkiel (1995) also analyzed the returns from investing in equity mutual funds 1971 to 1991 utilizing a unique data set including return from all mutual funds existing each year. He also evaluated the performance of mutual funds in terms of risk adjusted returns. For this, he used the CAPM model as:-

$$R_{Fd} - R_F = \alpha + \beta (R_{MKT} - R_F) + E_{Fd}$$

Where

R_{Fd} = Funds return

R_{MKT} = Market return

R_F = Risk-free return

α (alpha) is intercept and β is beta which measures the risk. Positive α implies positive risk adjusted return. His findings among other were:

- In an aggregate, funds had under performed bench mark portfolios both after management expenses and even gross expenses.
- The average α was negative when net returns were used and positive when gross returns were used, but neither significantly different from zero.
- While considerable performance persistence existed during the 1970s, there was no consistency in fund returns during the 1980s.
- Funds betas and returns were not related as the CAPM suggests.

Performance is also examined by Carroll (1972) with the help of profits. He analyzed the profits in the Airframe industry in USA. He used after tax profit as percent of equity, and profits to sales ratio for this. His study revealed followings:

Analysis of after tax profits as percentage of equity for all manufacturing, aircraft and parts, and the airframe industry, and further, profit per dollar of sales for all manufacturing and aircraft and parts indicated that each demonstrated the quite dismal aggregate performance of the industry from 1959 through 1961. Average industry profits as percent of stockholder's equity equated or exceeded all manufacturing mean in each year except 1959 and 1960, while profit to sales were consistently much lower than those for all manufacturing. Despite the period of low profits (and even losses), profits to equity ratio for the industry still exceeded those for all manufacturing during the whole period. On balance, economic profits appear to have existed in the airframe industry during the year 1957-1966.

Productivity is also used for evaluation the performance of companies. Unni, Lalittra, and Rani (2001) examined economic reforms and productivity trends in Indian manufacturing. They compared the growth rate of value added in Gujarat and all India and found that both organized and non organized sectors in Gujarat seemed to be doing better than all India average in terms of growth of value added.

Another study conducted by Brown and Goetzman (1995) examined the performance of mutual funds in USA in terms returns, number of mutual funds established and their total capitalization. They compared the returns of mutual funds with the returns of S&P 500. Their findings, among others, were that the mean returns on mutual funds during 1976 to 1988 was 14.50 percent which was higher than that of S&P 500. Their findings, among others, were that the mean returns on mutual funds during 1976 to 1988 was 14.50 percent which was higher than that of S & P 500 during same period. The capitalization of the funds and the number of funds also increased during the period. They, at the end, concluded that relative risk adjusted performance of mutual funds was persisted.

On the study of earnings and expected returns, Lamont (1988) tried to identify the variables which could predict expected returns as well. For this, he analyzed the relation of dividend yield, earnings yield and dividend payout ratio with returns employing the functional relationship established as follow;

$$R_{mt}-R_{ft} = f (PREL_t, d_t-p_t, d_t-e_t, et-p_t)$$

Where, R_{mt} is quarterly excess return on S&P composite index, d_t-p_t is the log dividend yield, $et-p_t$ is the log earning yield, and d_t-e_t , is log dividend payout ratio, $PREL_t$ is the relative bill rate.

His study concluded that the aggregate dividend payout ratio had forecasted excess returns on both stocks and corporate bonds in postwar US data. High dividends had forecasted high returns. But high earnings forecasted high returns. But high earnings forecasted low returns. Dividend and earnings contributed substantial explanatory power at short horizon.

D'Souza and Megginson (1999) compared the pre and post privatization financial and operating performance of 85 companies from 28 countries (15 industrialized and 13 non-industrialized) that experienced full or partial privatization through public share offering during the period from 1990 to 1996. The sample of companies being privatized in the 1990s was quite different from the same was privatized prior to 1990, particularly with respect to the much heavier representation of firms from the utility and telecommunication industries. They measured the performance in terms of following variables:

- Profitability: Return on sales (ROS), Return on Assets (ROA), Return on equity (ROE)
- Operating Efficiency: sales Efficiency (Sales/ total Employment), Net income Efficiency (Net income / Total Employment).
- Capital Investment: Capital Expenditure to Sales (CESA), capital expenditure to Total Assets (CETA).
- Output: Real sales (SAL), Total Number of employee.

- Leverage: Debt to Assets (TDTA).
- Dividends to Sales.

They documented significant increase in profitability, output, operating efficiency, and dividend payments, and significant decrease in leverage ratios for their full sample of firms after privatization, and for most sub- samples examined. Capital expenditure increased significantly in absolute terms, but not to relative to sales. Employment declined, but insignificantly. The study concluded that privatization yielded significantly performance improvements.

Gupta and Choudhury (2000) examined the long-term rates of return on a representative portfolio of 30 Indian Companies of the BSE Sensex over the period of 1980 to 1999. As a first step they computed the rate of return for individual scrip in the portfolio. This had been done by the method of internal rate of return (IRR) which was the discount rate 'r' in the following equation,

$$\text{Initial Purchase Price} = \frac{D_1}{(1+r)} + \frac{D_2}{(1+r)^2} + \dots + \frac{D_n + S_n}{(1+r)^n}$$

Where, r is the discount rate; $D_1, D_2 \dots D_n$ is year to year cash dividends; and S_n is the terminal price realized on sale after n years.

The study had been compared the rate of return over various holding periods and decomposed it into capital appreciation and dividend. They calculated 5 years, 10 years, 15 years moving average rate of return. The findings of their study were as follows,

The average rate of return (IRR) on the Indian equities was found 24.67 percent during 1990-95 and decreased to -4.43 percent in 1994-99 period.

Average return as capital appreciation and dividend were 19.58 percent and 5.08 percent during 1980-85. Average capital gain yield increased to 37.85 percent in period 1988-93 and

decreased to -6.56 percent during 1994-99, but average dividend yield continuously decreased to 2.12 percent during 1994-99 periods.

P/E ratio on the Indian equities had increased from 6.83 times in 1980 to 39.75 times in 1993, but again it had decreased to 12.20 times in 1999.

Average annual growth rate of earning per share was 12.58 percent during the period of 11.91 percent in the period of 1989-94.

Kothari and Warner (2001), analyzed the performance of mutual fund in USA in terms of risk adjusted return using the following model,

$$R_{pt} - R_{ft} = R_{Fd} - R_F = \alpha + \beta (R_{mt} - R_{Ft}) + E_{pt}$$

Where, R_{pt} is the mutual fund portfolio return in month t , R_{ft} is the risk-free return in month t , R_{mt} is the return on market portfolio on month t , E_{pt} is the white noise error term, and α and β are the regression's intercept and slope (beta risk) coefficients respectively.

They also used size, book to market, and momentum matched return to measure performance. They found more or less results with the results of Malkiel (1995) study.

From the above discussion, it is clear that performance is the result of various financial variables. Analysis of performance is not limited to analyzing the one or two variables. It could be analyzed with the help of various financial terms. Most of the studies, however, devoted to measure the performance in terms of profitability, stock returns, and turnover, risk adjusted returns on investment, dividends, growth of sales, market capitalization. Analyzing stock return constitutes market price per share and dividend per share. The trend of such variables over the period and comparison of the results with the results of the same variables of another firm or another industry indicates the relative performance of the firm or industry.

Studies on Fundamental Variables:

Among the various empirical contradictions, the cross sectional relation between stock returns and fundamental variables has been extensively studied in US, Japan, and Korea. In general, a positive relationship has been observed between equity returns and earning yield, cash flow yield and book to market ratio, and a negative relationship between equity returns and size. Especially voluminous are the studies that document the size and the earning yield effects and studies that try to disentangle the two effects (for example, Basu (1977, 1983), Banz (1981) Reinganum (1981), Cook and Rozeff (1984), and Westerfield (1989) and Ritter and Chopra (1989).

Clubb and Naffi (2007) examined the fundamental valuation perspective on stock returns. It suggests that book-to-market will be positively related to returns if market value of equity equals future expected cash flows discounted at the expected return and book value proxies for future cash flows. Building on this perspective, they developed a log linear model which includes expectations of future BM and ROE in addition to current BM as explanatory variables for future stock returns. These three variables explain a significant part of UK cross-sectional stock returns and that they remain highly statistically significant after including additional risk proxy variables. This supports relevance of fundamental valuation based firm characteristics for explaining stock returns and indicates their potential usefulness for predicting future stock returns.

Wang and Xu (2004) analyzed the determinant of the Chinese stock returns. This study applied the three-factor model to A-shares in the Chinese equity market, one of the fastest growing markets ever. The sample period was July 1996 through June 2002. Size was found to explain the cross-sectional differences in returns; the book-to-market ratio was not helpful. Beta did not account for return differences among individual stocks. Because of the speculative nature of Chinese capital markets, the large proportion of government-owned shares, and the low quality of the companies' accounting information, the free float (that is, the ratio of shares in a public company that are freely available to the investing public to total company shares) was added to the study to serve as a proxy for company fundamentals. The

three-factor model that included proxies for size and free float significantly increased the explanatory power of the market model-from 81 percent to 90 percent.

Kayacetin (2003) examined the cross-section of stock return of the Istanbul stock exchange. It studied the cross-section of returns on the Istanbul Stock Exchange (ISE) in a multi-factor model framework. He tested the explanatory powers of several company-specific variables, including firm size, book-to-market ratio, sales-to-price ratio, gross profit-to-price ratio, debt-to-equity ratio, and dividend yield on the ISE securities in the period from July 1993 to November 2002. Sales-to-price ratio and debt-to-equity ratio displayed a higher explanatory power on the cross-sectional variability in returns on the ISE compared to firm size, book-to-market ratio, and gross profit-to-price ratio; however, when debt-to-equity ratio and sales-to-price ratio were included in a single regression equation, the explanatory power of debt to-equity ratio was also subsumed by the sales-to-price ratio.

Diether, Malloy, and Scherbina (2002) provided evidence that stocks with higher dispersion in analysts' earnings forecasts earn lower future returns than otherwise similar stocks. This effect was most pronounced in small stocks and stocks that have performed poorly over the past year. Interpreting dispersion in analysts' forecasts as a proxy for differences in opinion about stock, evidence was inconsistent with a view that dispersion in analysts' forecasts proxies for risk.

Chan, Hamao, and Lakonishok (1993) analyzed relationship of stock returns with earnings yield, size, book-to-market equity ratio and cash flow yield in the context of Japanese stock market over the period 1971-88. They employed the Seemingly Unrelated Regression (SUR) model to adjust simultaneously for portfolio risk and to test for the significance of the fundamental variables. The basic model was,

$$R_{pt}-R_{ft} = a_{0t} + b_{1t}\beta_{p1} + b_{2t}\beta_{p2} + a_{1t} (E/P)_{pt} + a_{2t} (LS)_{pt} + a_{3t} (B/M)_{pt} + a_{4t}(C/P)_{pt} + e_{pt}.$$

The dependent variable is the return on portfolio P in month t, R_{pt} , less the risk free rate in month t, R_{ft} ; R_{wt} and RF_t are the returns on the value-weighted and equally weighted indexes in month t.

The indexes contained all stocks from both the first and the second sections. The fundamental variables analyzed in each month t included $(E/P)_{pt}$, the average earnings yield for portfolio p ; $(LS)_{pt}$, the average of natural logarithm of market capitalization for firms in portfolio P ; $(B/M)_{pt}$, the average book to market value for portfolio p ; and $(C/P)_{pt}$, the average cash flow yield for portfolio.

In their study, alternative statistical specifications and various estimation models were applied to a comprehensive, high equality data set that extended from 1971 to 1988. The sample included of 1570 companies from both manufacturing and non manufacturing firm, companies from both sections of the Tokyo Stock Exchange and also de-listed securities. Findings revealed a significant relation between returns in the Japanese market and four fundamental variables-earnings yield, size, book-to-market ratio and cash flow yield. The performance of the book-to-market ratio was especially noteworthy; this variable was statistically and economically the most important of the four variables investigated.

Their findings confirmed the existence of a "Size effect, small firm in their sample tended to out perform large firms, after adjusting for market risk and other fundamental variables. It was hardest to disentangle the effect of the earning with high E/P ratios outperform a strategy of holding low E/P stocks. If earnings yield was considered in isolation or included with size, indeed had a positive and significant impact on returns on adding the book-to-market equity ratio to the mode, the coefficient of earnings yield became insignificantly different from zero. In the context of full model, earnings yield even had a negative impact on stock returns, and were in some case reliably negative. The cash flow yield variable had higher predictive power than the earnings yield did in light of the distortions in the earnings of Japanese firms included by accelerated depreciation allowances.

Mukherji, Dhatt, and Kim (1997) investigated the relations between stock returns and fundamental variables in Korea revealed that annual stock returns during the 1982- 93 period were positively related to book-market, sales-price, debt-equity ratios, and negatively related to firm size but not significantly related to the earnings-price ratio or beta. These results were consistent with the findings of recent studies that value stocks outperform growth stocks over

long time periods in several international markets. Their findings also suggest that book-market and sales-price ratios are more consistent indicators of fundamental value than the earnings-price ratio. Furthermore, the debt-equity ratio was a more reliable proxy for risk than beta. The positive relationship of debt-equity with stock returns persists in portfolios formed on the basis of book-market and sales-price. The negative relationship of firm size with stock returns was also apparent in portfolios formed on the basis of book-market and earnings-price ratio. These findings indicated that greater leverage and smaller size generally result in higher returns for both value and growth stocks.

Kim (1997) re-examined the explanatory power of beta, firm size, book-to-market equity, and the earnings-price ratio for average stock returns. This paper found stronger support for the beta pricing theory than does Kim (1995). After correcting for the EIV bias, he found stronger support for the beta pricing theory than previous studies or market betas had economically and statistically significant force. Regardless of the presence of firm size, book-to-market equity, and earnings-price ratios, betas have significant explanatory power for average stock returns. In particular, firm size was barely significant using monthly returns, but no longer significant using quarterly returns. However, book-to-market equity still had significant explanatory power for average stock returns,

Jagannathan and Wang (1996) assumed that the CAPM holds in a conditional sense, (i.e., betas and the market risk premium vary over time). By assuming that the CAPM holds period by period, concluded that the size effect become much weaker in predicting expected returns. They found that the conditional version of the CAPM explained the cross-section of stock returns rather well. In doing so, they implicitly assumed that the portfolios of stocks used in the study were economically important. For this study they evaluated three betas where as the standard CAPM has only one beta.

Porta (1996), On the analysis of relationship between expected growth rate and stock returns, identified that one year post formation row return for stocks with low expected growth rates was 20 percent higher, on an average, then the return for the stocks with high expected growth rates. He found that investment strategy based on buying stocks with low price to expected

growth ratio and selling short stocks with a high price to expected growth ratio yielded excess returns with in his sample.

Kothari, Shanken, and Sloan (1995) analyzed the Cross-section of Expected Stock Returns. It reveals economically and statistically significant compensation for beta risk when betas are estimated from time-series regressions of annual portfolio returns on the annual return on the equally weighted market index. The relation between book-to-market equity and returns was weaker and less consistent than that in Fama and French (1992). They conjectured that past book-to-market results using COMPUSTAT data were affected by a selection bias and provide indirect evidence.

Fama and French (1995) studied whether the behavior of stock prices, in relation to size and book-to- market-equity (BE/ME), reflects the behavior of earnings. Consistent with rational pricing, high BE/ME signals persistent poor earnings and low BE/ME signals strong earnings. Moreover, stock prices forecast the reversion of earnings growth observed after firms are ranked on size and BE/ME. Finally, there were market, size, and BE/ME factors in earnings like those in returns. The market and size factors in earnings help explain those in returns, but they found no link between BE/ME factors in earnings and returns.

Fama and French (1992) conducted the study on cross-section of expected stock returns. They identified the relationship of average returns with market beta and size. They also examined the role of earning price ratio, leverage, and book to market equity in average returns. Their goal was to evaluate the joint role of market beta (β), size, E/P; leverage, and book to market equity in the cross-section of average returns on NYSE, AMEX, and NASDAQ stocks. They used the monthly data for the period July 1941 to December 1990.

They found that the relation between market beta (β); and average return disappeared during the more recent 1963-1990 period, even when β where, is used alone to explain average returns. The appendix showed that the simple relation between β and average return was also weak in the 1941-1990 periods. In short, their tests did not support the most basic prediction of the SLB model, that average stock returns are positively related to market β s. Their results on the absence of a relation between β s and average stock returns for 1963-1990 were so contrary to the tests of the Sharpe-Lintner-Black model by Black, Jensen, and Scholes (1972),

Fama and MacBeth (1973), and Chan and Chen (1988), Unlike the simple relation between β_s and average return, the univariate relations between average return and size, leverage, E/P, and book-to-market equity were strong. In multivariate tests, the negative relation between size and average return was robust to the inclusion of other variables. The positive relation between book-to-market equity and average return also persists in competition with other variables. Moreover, although the size effect has attracted more attention, book-to-market equity had a consistently stronger role in average returns.

In a nutshell, market β_s seems to have no role in explaining the average returns on NYSE, AMEX, and NASDAQ stocks for 1963-1990, while size and book-to-market equity capture the cross-sectional variation in average stock returns that is related to leverage book to market ratio can mathematically be obtained from these two types of leverage measures [namely, book leverage and market leverage].

Davis (1994) conducted the study on The Cross-Section of Realized Stock Returns. The Pre-COMPUSTAT Evidence. The sample period had been covered from July 1940 to June 1963. The data for the study were taken from two primary sources. Book value, earnings, cash flow, and sales figures were collected from the Moody's Industrial Manuals. Stock returns, Stock prices, and market values of equity were collected from the University of Chicago's Center for Research in Security Prices (CRP) monthly file on New York Stock Exchange (NYSE) and American Stock Exchange (AMEX). Then he analyzed the ability of fundamental variables (i.e., book to market equity ratio, earnings yield, cash flow yield, and historical sales growth) to explain the cross-section of realized stock returns. The results of his study indicated that book-to-market equity, earnings yield, and cash flow yield had positive impact and significant explanatory power with respect to the cross-section of realized stock returns during the period from July 1940 through June 1963; where as, size and historical sales growth rate had negative impact on stock returns.

Hirschey and Spencer (1992) found Cash flow, growth, risk (beta), research and development and advertising expenditures were all key fundamental factors that help determine the earnings prospects of individual companies. This note demonstrates how the market valuation

of these fundamental factors varies over firm-size classes during the different economic conditions and market environments of the 16-year period 1975-90.

Similarly Banz (1981) also tried to show the relationship between return and market value of common stock. His finding was market equity [i.e. size] had most significant negative relationship with returns. Basu (1983) also tried to show the relationship between earnings yield of market value, and return for NYSE common stock: future evidence his findings was earnings price ratios (E/P) helped to explain the cross-section of average returns. E/P had most significant positive relation with average returns.

Two main conclusions seem relevant. First, the market value effects of fundamental factors are surprisingly consistent over an extended period of widely varying interest rates and general economic conditions. Second, the influences of fundamental factors appear to be affected by firm size. More specifically, * cash flow is important in each period and each size class, but it is most important for relatively large firms; * growth has a uniformly positive market-value influence on small, medium and large firms; * the link between fundamental beta and market value is strong for small firms but not for medium and large firms, suggesting that returns to investing in small firms may indeed be affected by idiosyncratic risks; * R&D has a dramatic effect on the market values of all size classes, but its strength is inversely related to firm size; * advertising expenditures have a durable effect on market value only in the case of large firms.

A study by Goetzmann and Jorin (1993) examined the ability of dividend yields to predict long horizon stock returns. The result of study revealed that there were no strong statistical evidences indicating that dividend yields could be used to forecast stock returns.

Most of the above mentioned empirical studies are devoted to analyzing the cause and effect of fundamental variables on stock returns using cross- section and time series data from different countries. The findings generally revealed the positive relationship of stock returns with earnings yield, cash flow yield, profitability, leverage and book to market value, and negative relationship with size (i.e., market capitalization). Furthermore, it is important to be noted that the CAPM has been victimized by these studies as evidence of beta has not strong explanatory power as compared to book to market value and size.

2.3 Review of Major Studies in Nepal

Development and expansion of capital market are essential for the rapid economic growth of the country. Capital market helps economic development by mobilizing long-term capital needed for productive sector. It is vital to long-term growth and prosperity of the economy since it provides the channel through which needed funds can be raised (Shrestha, 1988). The capital market can be decomposed into securities market and non-securities market. Securities market is the mechanism that allows suppliers and demanders of funds to make transaction. It is the market where securities are traded. It plays a key role in the purchase and sales activities of investors. Non securities market refers to the mobilization of the financial resources by the financial institutions in the form of deposits and loans. Stock market is a major component of the securities market. Stock market is a mechanism through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. Similarly, stock market provides the best investment opportunity to the investors. It also impacts liquidity to the securities holders. One of the most valuable services performed by securities market is to maintain active trading of securities so investors can buy or sell securities immediately (Sharma, 1996).

Security market is recognized as an effective way of raising capital for commercial enterprises, and at the same time providing an investment opportunity for individuals and institutions. The activities of buying and selling securities in the securities markets are extremely important for the efficient allocation of capital within economies. Securities market play a crucial role in the economy by channeling investment where it is needed and by putting it to best use (Lieberman and Fergusson (1998), The securities market is a requisite for the sound development of an economy because it not only provides stable long-term capital for companies and an effective savings vehicle for public, but also functions as an efficient tool for resource allocation. The development of the securities market is a necessary factor for modern day economy. There should be no doubt regarding the significance of securities market as it is clear that countries having developed securities market mechanism are developed and countries with poor securities market mechanism are underdeveloped

[Dhungel (2001)]. Thus, securities markets assume a greater role and significance in the present day economies.

The organized stock market is a recent phenomenon in Nepal. In the beginning of the organized open cry system, there was a brisk in stock market activities. Share prices were increasing immensely. The turnover volume was also high. But the increased share price could not last for long and soon the prices began to fall, this is because of lack of knowledge and information about the market and the stock to the investors. It is there for possible for few individual to manipulate the price of securities and engage in undesirable practices. The government has established security board Nepal as an apex regulatory body to facilitate the orderly development of dynamic and competitive stock market and to maintain its creditability, fairness, efficiency and transparency and responsiveness.

The history of securities market in Nepal is more than six decades old. Biratnagar Jute Mills and Nepal Bank Ltd. are pioneer companies in floating shares in the market. In 1937, Tejarath was set up to facilitate loans to the government employees and was converted into Nepal Bank Ltd. HMG Nepal introduced the Company Act in 1964 and the first issue of government bonds made in the same year through Nepal Rastra Bank to collect the developmental expenditures. HMG Nepal announced the industrial Policy in 1974 and under this policy an institution named Securities Marketing Center (SMC) was established to deal in government securities-development bonds and national savings bonds, and corporate securities of few companies.

The government has the virtual monopoly over the security market. Then, Securities Exchange Center (SEC) was established in 1976 with an objective of facilitating and promoting the growth of capital market. It was the only capital market institution in Nepal. Securities Exchange Act came into force in 1984. Since then, SEC started to operate under this act. The purpose of this act was to provide systematic and favorable market environment for securities ensuring and protecting the interest of individuals and institutional investors as well as to increase the public participation in various firms and companies (Gurung, 1999). SEC had provided facilities to trade the government securities and few of corporate securities

like shares and debentures. Only the shares of 10 companies were listed in SEC and there was involvement of no broker and dealer in the securities market. So, SEC itself was undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services (NEPSE 1998). Apart from this, there was the absence of effective secondary market to ensure liquidity to the securities.

The interim government (1990/91) initiated financial reform program and two indirect investment vehicles-Citizen's Investment Fund and NIDC Capital Markets Ltd.-were established with the collective investment schemes in the corporate sector (Gurung 1999). Then, due to the world whim of privatization and economic liberalization, the operation of SEC was felt to change to make it compatible with the changing economic system. As a result, HMG Nepal brought about change in the structure of SEC by dividing it into two distinct entities-Securities Board, Nepal (SEBO/N) and Nepal Stock Exchange Ltd. (NEPSE) at the policy level in 1993. Since then they are operating as the main constituents of securities market in Nepal. SEBO/N was established on June 7, 1993 with its mission to facilitate the orderly development of a dynamic and competitive capital market and maintain its credibility, fairness, efficiency, transparency and responsiveness under the Securities Exchange Act 1983 (SEBO,2001). It is an apex regulator of the securities market in Nepal. It registers the securities and approves the public issues. Moreover, SEBO frames the policies and programs required to monitor the securities market, provides license to operate stock exchange business and stock brokers and supervises and monitors the stock exchange operations and securities businesspersons. NEPSE Ltd. is a non-profit organization, operating under Securities Exchange Act, 1983.

The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through market intermediaries such as brokers and market makers, etc. NEPSE opened its trading floor on January 13, 1994 through its newly appointed licensed members and has adopted an "Open Out-Cry" system for the transaction of securities. The trading floor is restricted to listed

corporate securities and government bonds with the market intermediaries in buying and selling of such securities.

Total number of the companies listed at the NEPSE reached 148 in mid-June 2008 compared to 134 a year ago. Among the currently listed companies, 113 are bank and financial institutions. Production and processing industries, hotels, business entities, hydro-power and companies in other groups are 21, 4, 5, 3, and 2 respectively. Monthly turnover to market capitalization ratio stood at 0.69 percent in mid-June 2008 compared to 0.53 percent a year ago.

The different variables such as earning per share, dividend per share, and net worth per share are also very crucial to analyze which affect market price and all these help to evaluate the performance of company. A continued controversy in the investment community concerns the relevance of dividend verses earnings as the underlying source of value of a share of common stock. Clearly, earnings are important to stockholders because earnings provide the cash flow necessary for paying dividends. However dividends are also important because dividends are what stock holders actually receive from the company. If management increases the proportion of earning per share pay out as dividends, they could make their stock wealthier, suggesting that the dividend decision (i.e. deciding on the amount of dividends to pay) is very much important (Sharpe, 2000). So earning per share, dividend per share net worth per share and ultimately market price per share and the result of the firm's overall operating efficiency and appropriate dividend decision which reflects the performance of the firms. In this section the studies related to fundamental variables have been reviewed.

Adhikari (2007) investigated the effect of yields, earnings to price and dividends on financial performance of Nepalese companies it observed that higher earnings yield had higher returns. The negative book-to-market/return relationship and positive dividend payouts/return relationship observed in the study contradict with the empirical finding in the context of big and developed stock market. Similarly, the positive earnings yield/return relationship and the negative market size/return relationship observed in the study. It determined that both, positive and negative relationship exist between returns (i.e. dividend yield, capital gain yield

and total yield) with the fundamental variables (i.e. earning yield, book-to-market equity ratio, size, cash flow yield and dividend payouts) in the context of Nepalese enterprises.

In Nepalese context, Pradhan (2004) in his study addressed fundamentals of stock returns in the context of Nepal, the study based on pooled cross sectional data of 40 enterprises whose stocks were listed in NEPSE Ltd. and traded in the stock market. He examined the relationship of stock returns such as, dividend yield, capital gain yield and total yield with fundamental variables such as earning yield, size, book-to-market equity ratio and cash flow yield of Nepalese enterprises by estimating various models. The theoretical statement of models was;

$$R = f(E/P, LS, B/M, C/P)$$

The estimated equation was,

$$R = a + b_1 (E/P) + b_2 (LS) + b_3 (B/M) + b_4 (C/P) + U_i$$

Where,

Dependent variable, R chosen for the study had been specified as under;

DY = Dividend yield or dividend per share to market price per share i.e. D_1/P_0 .

CY = Capital gain yield or, capital gain per share to market price per share i.e. $(P_1 - P_0)/P_0$

TY = Total yield or dividend per share plus capital gain per share to market price per share, i.e. $\frac{(P_1 - P_0 + D_1)}{P_0}$

The independent variables are specified as under

E/P = Earning yield or earning per share to market price share.

LS = Size or natural logarithm of market capitalization.

B/M = Book value of equity per share to market value of equity per share.

C/P = Cash flow yield or earning per share plus depreciation expenses per share to market price per share.

U = Disturbance or error term

Some major findings revealed in study were as follows:

- Earnings yield and cash flow yield had significant positive impact on dividend yield, and an insignificant impact on book-to-market value.
- The size had a negative impact on dividend yield. In case of earning yield and cash flow yield, cash flow yield had been found to be more informative than earning yield.
- Stock with higher capital gain yield had higher earnings yield.
- Larger stocks had higher capital gain yield.
- Capital gain yield was positively influenced by earning yield and size, whereas, the same is negatively influenced by book to market value and cash flow yield, book-to-market value had been found to be statistically strong in predicating capital gain yield.
- Total yield was negatively determined by book-to-market equity *ratio and cash flow yield whereas, positively determined by earnings yield and size*. Among all the variables, book-to-market equity ratio had the most predictive power in predicting total yield.
- Similarly, there was positive relationship among earnings yield, book-to-market equity ratio and cash flow yield. However, the size was negatively related to these three variables.

Dividend and capital gains are the returns of the investors in common stocks. The returns may be influenced by the liquidity, leverage, profitability, turnover and other variables. Another research conducted by Pradhan (1993) about it, in his study of Stock Market Behavior in Small Capital Market, identified the relationship of liquidity (LIQ), leverage (LEV), earnings (EARN), turnover (TURN) and coverage (COV) with market equity (ME), market value of

equity to its book value (MV/BV), price earning ratio (PE), dividend per share to market price per share (DPS/MPS). For this, he collected data from 17 companies from 1986 to 1990 and employed the following model based on pooled cross-section analysis of 55 observation,

$$v = b_0 + b_1 \text{LIQ} + b_2 \text{EV} + b_3 \text{EARN} + b_4 \text{TURN} + b_5 \text{COV} + V_i,$$

Where

The dependent variables, V chosen for the study were ME, MV/BV, PE, DPS/MPS and DPS/EPS.

Some findings, among others, of the study were as follows;

- Larger stocks have larger earning ratios, smaller dividends, and lower profitability.
- Stocks with larger market value to book value of equity have lower dividends, lower profitability.
- Stocks with larger price earning ratios have profitability, and small dividends ratios.
- Stocks paying higher dividends have higher liquidity, lower leverage, higher earnings, higher turnover, and higher interest coverage. However, liquidity and leverage ratios are more variable for the stocks paying lower dividends while earnings, assets turnover and interest coverage are more variable for the stocks paying higher dividends.

Manadhar (1998) analyzed the impact of dividend per share, earning per share, price earning ratio on equity, and dividend yield on market capitalization. Multiple regression was employed to test and analyze the cause and effect relationship between dependent and independent variables. Mathematically, multiple regression equation employed in the study was as follows:

$$Y = f(X_1, X_2, X_3, X_4, X_5)$$

Where,

Y = Market capitalization

X_1 represents DPS = Equity dividend divided by number of equity shares,

X_2 represents EPS = Net income divided by number of equity shares,

X_3 represents P/E = Closing price divided by EPS,

X_4 represents ROE = EPS divided by paid up price multiplied by 100

X_5 represents D/P = DPS divided by closing market price per share

The result of the regression model was found to be

$$Y = 331.00 + 29.40x_1 - 6.14x_2 - 1.43x_3 + 3.42x_4 - 144x_5$$

The major findings of his study were as follows:

- DPS, ROE, and D/P have the significant impact whereas ROE and P/E have no significant impact on market value.
- DPS and ROE are positively related to market capitalization but EPS, P/E and D/P are negatively related with market capitalization.

K.C. (1996) analyzed the relationship of different variables with each other, i.e., Opening size(O), Growth rate(G), Post tax rate of return (PST), Pre-tax rate of return (PRT), Growth by relation (R), Growth by debt (D), Growth by equity (E), Tangible assets (TNA) and Age (A). The study was fully based on correlation analysis. He collected the data from 37 Nepalese enterprises for a period between 1980 and 1990.

The study revealed the following.

- Debt was main source of finance for growth.
- Retention was highly correlated with post- tax and pre-tax rates of return but since the Nepalese companies had negative retention and no significant relationship between growth and retention was found.
- The post tax rates of return of the companies decreased with increase in their age.

- Equity was found negatively related to age.

To analyze the performance of listed companies in terms of risk and return and internal rate of return, systematic risk and diversification of risk through portfolio context (Bhatta, 2000) addressed the following in risk return behavior from the analyses of different stocks.

A highly significant positive correlation-ship has been addressed between risks and return character of the company. Investor expect higher rate of return from those stocks that associate higher risk. Nepalese capital market is not efficient one, so the stock price does not contain all the information relation to market and company itself. Neither investors analyze the overall relevant information of the stock nor do the members of stock exchange try to disseminate the information. So the market return and risk both may not show high priced stock such as BBC, NIB, NIC has higher risk than other. These companies thus require higher return to dissatisfy the investor for their risk premium.

Investors in Nepal have not yet practiced to invest in portfolios of securities. An analysis of the two-security portfolio shows that the risk can be totally minimized if the correlation is perfectly negative. In this situation, the risk can totally be diversified, but when there is perfectly positively correlation between the return of two securities, the risk is not diversifiable. The analysis shows some has negative correlation and some has positive one. Negative correlation between securities is preferred for diversification of risk.

On the basis of finding Bhatta concludes: An analysis of risk and return shows that many companies have higher unsystematic or specific risk. There is a need of expert institutions, which will provide consultancy service to the investors to maximize their wealth through rational investment decision.

Balampaki (2001) examined the fundamentals of stock returns in Nepal. The Study had been conducted at a portfolio level based on pooled cross-sectional data analysis of 40 enterprises for the period of (1995-2000). Results revealed that positive relationship of dividend yield with earnings yield, book to market ratio and cash flow yield, where as negative relationship

with size. Cash flow yield had found strong explanatory power in predicting the dividend yield.

- There was positive relationship of capital gain yield with earning yield and size, whereas, negative relationship with book to market value of equity.
- Total yield was positively related to earnings yield and size, whereas negatively related to book to market equity ratio and cash flow yield

Neupane (2004) conducted a study on determination of stock price in Nepal Stock Exchange, it was assumed that market price of share was influenced by the changes in EPS, DPS, and BPS to determine the magnitude of the independent variables to the dependent variable. Simple and multiple regression analysis were made and magnitude was identified after determining the regression equation. And his findings were as follows

- In NEPSE, there were controversial results that the share price in NEPSE were not significantly affected by the dividend, book value, and earning per share there might be other factor that played significant role to determine the stock price in Nepal.
- The MPS has not been significant effect by interest rate, retention rate, stock dividend, cost of equity, tax rate, value of US \$ and gold price, global economy, market liquidity, season, day the week, size and change in management whereas these factors have simple effects in stock pricing.

Dahal (2007) conducted a study on determination of stock price of listed companies in Nepal Stock Exchange. Main objective of this study was to determine the major financial indicators that have major influence on stock price, to study whether stocks of the sampled companies were over priced, under priced or equilibrium price and to find out investor's response regarding the change of stock price and his findings were as follows:

- Four financial indicators EPS, DPS, BVPS heavily determined the equity price. Other extraneous factors also caused equity price to fluctuate. Investors must look after all factors,

which explicitly or implicitly affected equity price so that they could arrive at rational decision.

- Information disclosed, timely AGM, other political and economic factors such as political stability, national economy, peace, strikes/ Bandhas, demand and supply situation of the share, cease-fire etc were some important factors having significance influence on the share price.

Upadhayay (2007) examined determination of stock price in Nepal Stock Exchange. The main purpose of this study was to identify the factors responsible for determinants of stock price and their relationship with stock price and his findings were as follows

- Adequate knowledge and information regarding the capital market was lacking in Nepalese investors. This is precisely the reason why they were cheated by the concerned companies and the NEPSE showed rather irrational behavior
- Secondary data analysis revealed that price behaviors differs company to company even though DPS, EPS, and BVPS, jointly have significant effect on the share price, individually they did not have consistent relationship with MPS. It means that there may be other major factors influencing and determining the share price significantly.
- Primary data summarized that company performance (EPS, Book-value, DPS, risks), information disclosed, timely AGM, political instability, national economy, peace, strikes, demand and supply situation of the share, cease fire etc were some factors having significance influence on the share price. Similarly other relevant factors, interest rate, tax rate, seasonal factors, day of week effects, gold price, global economy, values of US \$, cost of equity, market liquidity, size of the firm and change in management have not seen significant effect.

The study of Bajracharya (2008) has focused on determining and analyzing the pricing behaviour of equity price. Its main objective was to analyze the major financial indicators, which affect on determining the equity prices and to assessed weather stocks were overpriced, under priced or equilibrium price. He found

- Four financial indicators EPS, DPS, NWPS, and capital gain, heavily determined the equity price.

- Economic and social environment have close relationship with the price behaviour of share and they influenced the stock market with respect to the importance of the event. Investors were more conscious towards the dividend streams, bonus share, price appreciation and marketability equity share. However, most of the investors were only using buy and hold strategy as only few of them were trading their share in secondary markets.

Subedi (2008), studied on determinants of stock price in Nepal Stock Exchange. The objective of this study was to determine the effects of earnings, book value and dividend to the stock price. And his findings were as follows:

- Price behaviors differs company to company even though DPS, EPS, and BVPS, jointly have significant effect on the share price, individually they did not have consistent relationship with MPS. It means that there may be other major factors influencing and determining the share price significantly
- Information disclosed, timely AGM, political stability, national economy, peace, strikes, demand and supply situation of the share, cease fire etc were some factors having significance influence on the share price. Similarly other relevant factors, interest rate, tax rate, seasonal factors, day of week effects, gold price, global economy, values of us\$, cost of equity, market liquidity, size of the firm and change in management have not seen significant effect.

2.4 Concluding Remarks

Investment is a commitment of money and other resources that are expected to generate additional money and resources in the future. Such a commitment takes place in the present and is certain to occur but the reward comes in the future and always remains uncertain. Investment decisions are generally based on future returns. Higher expected returns attract the potential investors. Investors expect regular dividend and smooth appreciation in their assets. Therefore, stock return is calculated as change in stock price plus cash dividend divided by beginning stock price. Stock returns are influenced by different fundamental variables.

The fundamental variables constitute earnings yield, size, book to market value of equity and cash flow yield, and various measures of liquidity, leverage, profitability, assets turnover, interest coverage and other ratios. They measure the economic and financial performance whether the companies are in a good or bad position.

Various studies have been conducted on the basis of stock returns and fundamental variables. There fore it is clear that stock return is the function of various fundamental variables. Generally, above mentioned empirical studies devoted to analyzing the cause and effect of fundamental variables on stock returns using cross-section and time series data from different countries. The findings of these studies, in general, positive relationships of stock returns with earnings yield, cash flow yield, and book to market value, profitability and leverage, and a negative relationship with size of the four fundamental variables considered, cash flow yield and book to market value has strong explanatory power in predicting stock returns than earning yields and size. Above empirical studies shows that cash flow yield has seemed to be more informative than earnings yield, since earnings are likely to be distorted by the substantial divergence between economic and reported depreciation. This kind of result is consistent with the “quality of earnings” explanation discussed by Bernard and Stober (1989), according to which earning per share is more easily manipulable. The performance of size variables is consistent among the various empirical studies.

In the context of Nepalese stock market, considerable attention has been paid to analyzing the relationship between stock return and fundamental variables. These study reveals that positive relationship exists among earning yield, book to market value and cash flow yield. However, the size is negatively related to stock returns. Earning yield and cash flow yield have positive significant impact on dividend yield, and insignificant impact on book-to market value. However, the size has negative impact on dividend yield. Capital gain yield is positively influenced by earning yield and size, whereas the same is negatively influenced by book to market value and cash flow yield. Similarly, it is noticed that total yield is positively determined by earnings yield and size, whereas the same is negatively determined by book to market value and cash flow yield.

Due to lack of the adequate knowledge of individual investors and their unwillingness to use the service of the stockbrokers and lack of assessing information regarding to share price of the market in accurate matter, the real market price of share can't be reflected in almost cases in Nepalese stock market. Based on the above studies it is also concluded that the determining factors of the MPS are not only DPS and EPS but there are other several factors which determines the MPS like BPS, retention ratio etc to generalize the responses of the different

respondent groups, the market price of share is affected by DPS, EPS, demand and supply of share price, instability of government , strikes, economic condition of the nation, growth rate of the organization , communication and information technology. On the other hand the MPS is not affected by low tax rate and open cut cry system has not discouraged the stock brokers in their service

Most of the listed companies' did not provide sufficient and timely information to NEPSE as well as their share holders and even the supplied information has not similarity. Meaning that companies were tried to attract potential investors by providing exaggerated information regarding their performances

Nepalese stock market is infancy stage. There is a gap between the theory and practice of investment in Nepalese stock market due to lack of proper study / analysis of stock market. Share holders are not confined enough to invest in the share. Professionalism is lacking .where as on the other hand Poor rules and regulations, as well as lack of effective regularity mechanism; capital market has not been growing as per expectation. These factors constrained the smooth development of security market.

In spite of several constraints, the NEPSE has been growing gradually the commercial banks sector is the best performer among the listed companies. We can't undermine the truth that with the presence of peace and political stability, the capital markets gets far better soon.

CHAPTER III

RESEARCH METHODOLOGY

Research is a systematic and organized effort to investigate a specific problem that needs solution. Methodology refers to various steps that are generally adopted by a researcher in studying this research problem along with the logic behind it. Thus, research methodology is a way to systematically solve the research problem, what we are doing at present.

Both descriptive and analytical types of research are employed to fulfill the objective of research work. Primary sources of data were questionnaire with officials.

3.1 Research Design

"Research design is the plan structure and strategy of investigation conceived so as to obtain answers to research question and to control variance"(Kerlinger: 1986, 275). It provides the general framework for collecting, analyzing and evaluating data after identifying, what the researcher wants to know, and what has to be dealt with in order to obtain required information.). The research design is an organized approach and not a collection of loose unrelated parts. It is an integrated system that guides the researcher in formulating, implementing, and controlling the study. (Wolff and Pant, 2005: 92). In order to conduct this study, descriptive and analytical research design has been adopted. Descriptive research design has been utilized mainly for conceptualization of the problem. Analytical research design has been followed mainly to analyze the relationship between returns and different fundamental variables.

Descriptive research is a fact- finding operation that describes the existing phenomena. Descriptive studies simply portray an accurate profile of organizations, events or situation. Thus the research design adopted in the study is of descriptive type. Correlation research design is used to ascertain the extent to which two variable are related. The researcher's main

interest is to determine whether two or more variable covary, and if so, to establish the direction, magnitude and form of observed relationships. Variables thus may be closely related, moderately related, or completely unrelated. There are three types of correlations.

- Positive correlation exists when an increase in one variable is accompanied by an increase in another. For example, increase in earnings yield increases dividend yield.
- Negative correlation exists when two variables are inversely related. An increase in one variable would result in a decrease in another. For example, an increase in size of the organization could results in decrease in returns.
- No correlation exists when no discriminable correspondence prevails between high and low ranks

Correlation range over a scale, which extend from a perfect negative (-1.0) correlation to no correlation (0.0) to a perfect positive correlation (+1.0). The correlation technique is thus valuable research tool. A coefficient of correlation, however, does not apply that cause -effect relationship necessarily exists.

The research design adopted is correlation research design. Causal comparative research investigates the possible causes affecting a particular situation by observing existing consequences and searching for the possible factor leading to these results. (Wolff and Pant, 2005: 107). The study thus also employed causal comparative research design.

3.2 Nature and Sources of Data

This study is based on both secondary data and primary data. The necessary data and information have been collected from various sources covering a period of 10 years, i.e., from F/Y1997/98 to 2007/08 from the website of SEBON:<http://www.sebonp.com> to analyze the relationships among different variables, this study uses pooled cross-sectional data of 38 enterprises with 268 observations for the period of 1997/98 to 2007/08. The balance sheet of selected enterprises provides the information on market value of equity, book value of equity, fixed assets, long term debt, total debt, net worth and other related variables. Similarly, profit

and loss account provides dividends, net profit, cash flow amount and interest expenses and other statements provide share price, total capitalization, number of share outstanding etc. Then various ratios and variables have been computed as required for the study. The major sources of data and information are as follows:

- The website of NEPSE Ltd. I <http://www.nepalstock.com>
- Website of SEBO/N://<http://www.sebonp.com>
- Profile of SEBO/N from FY1997/98 to FY 2006/07.
- The Journal of Financial Economic
- The journal of Finance and journal of Financial Economics.
- Annual reports of the selected enterprises
- Various Research studies, Dissertations and Articles related to the subject.

The survey of financial executives and experts is based on a structured questionnaire in the selected sectors. A total of 38 enterprises were selected. The sample selected for this section of the study is drawn from the groups, namely, commercial banks, development banks, financial institutions, Hotels, insurance companies and Manufacturing companies.

3.3 Selection of Enterprises

There are total number of listed companies remained to be 142 during the fiscal year 2007/08. Among the listed companies here only the from 4 sectors, Commercial Banks, Development Banks, Finance Companies, Insurance Companies, have selected and 6, 2, 5, and 2, respectively from each group are selected as a sample

Table 3.1

Sector wise Selection of Sample from the Total Listed Companies

S.N.	Sector	No. of sample (n)	No. of listed companies (N)	Sample percentage
1	Commercial Bank	12	17	70.59
2	Development Bank	2	23	8.69
3	Finance Company	13	55	23.64
4	Insurance Company	5	17	29.41
5	Mfg & Processing Co.	3	18	16.7
6	Trading Company	-	4	-
7	Hotel	3	4	75
8	Other Company	-	4	
	Total	38	142	26.76

Source: Annual Report, 2007/08, SEBO/N.

The list of the selected companies and its period of used data to conduct this study are shown in the table 3.2 as below

Table 3.2
Selection of Companies, Period of Study, and Number of Observations.

S.N.	Name of the companies	Year	Observations
1	Nabil bank Ltd.	1997/98 to 2006/07	9
2	Standard chartered Bank Nepal Ltd.	1997/98 to 2007/08	11
3	Nepal investment Bank ltd.	1997/98 to 2005/06	9
4	Himalayan Bank Ltd.	1997/98 to 2006/07	10
5	Everest Bank Ltd.	1997/98 to 2007/08	11
6	Nepal SBI Bank Ltd	1997/98 to 2007/08	11
7	Bank of Kathmandu Ltd	1997/98 to 2007/08	11
8	Nepal industrial and commercial Bank Ltd	2000/01 to 2005/06	6
9	Laxmi Bank	2001/02 to 2007/08	7
10	Machhapuchhre Bank	2001/02 to 2007/08	7
11	Kumari Bank	2004/05 to 2006/07	3
12	Siddhartha Bank ltd.	2003/04 to 2007/08	5
13	Nepal development bank ltd	2001/02 to 2005/06	5
14	Saanima Bikaas bank	2003/04 to 2005/06	3
15	Narayani finance limited	1997/98 to 2005/06	9
16	Samjhana finance limited	1997/98 to 2005/06	9
17	Pashchimanchal finance limited	1997/98 to 2005/06	9
18	Pokhara finance limited	1997/98 to 2005/06	9
19	siddhartha finance limited	1998/99 to 2005/06	8
20	Butwal finance limited	2001/02 to 2005/06	5
21	NIDC capital market	2002/03 to 2005/06	4
22	Goodwill finance limited	2000/01 to 2005/06	6
23	Annapurna finance limited	2000/01 to 2005/06	6
24	Nepal housing finance limited	2000/01 to 2005/06	6
25	National finance company Ltd	2000/01 to 2005/06	6
26	Nepal share Market ltd	2000/01 to 2005/06	6
27	Lumbini finance and leasing company	2000/01 to 2005/06	6
28	Neco insurance Ltd.	2000/01 to 2003/04	4
29	Himalayan insurance company	1997/98 to 2003/04	7
30	United insurance company	2000/01 to 2005/06	6
31	Premier insurance company	2000/01 to 2005/06	6
32	Sagarmatha insurance company	2000/01 to 2005/06	6
33	Taragaon Hotel ltd	2000/01 to 2005/06	6
34	Oriental Hotel	2000/01 to 2005/06	6
35	Soaltee Hotel Ltd	1999/00 to 2001/02	3
36	Bottlers Nepal(terai)	1997/98 to 2005/06	9
37	Bottlers Nepal(Balaju)	1997/98 to 2005/06	9
38	Uniliver Nepal Ltd	1997/98 to 2005/06	9
Total observations			268

Source: Webpage of NEPSE. Ltd: <http://www.nepalstock.com>

Thus, the study uses maximum of 268 observations for the analysis of different variables with the help of pooled cross-sectional data of 38 enterprises for the period of 1997/98 to 2007/08. The enterprises selected for the study can be considered representative of banks, finance companies, and insurance companies, hotels, manufacturing and processing companies.

3.4 Method of Analysis

Analysis is the careful study of available facts so that one can understand and draw conclusion from them on the basis of established principles and sound logic '(Cattle, 1988). The statistical techniques of regression analysis, both simple and multiple, linear and non-linear are employed to a number of cases. Various statistical tools are used to confirm the relationship between stock returns and fundamental variables and to test the robustness of the results. The empirical results have been extracted in this study by using annual data of listed companies from 1997/98 to 2007/08.

(a) The Econometric Models

The study, among others, attempts to estimate various econometric models to confirm the relationship between stock returns and fundamental variables and to test the robustness of the results. The alternative statistical specifications are also attempted in each case where necessary in order to obtain the best possible results. The study examine the relationship of stock returns (R) such as dividend yield, capital gain yield and total yield with fundamental variables such as, earnings yield (E/P), size $\ln(ME)$, book to market equity ratio (B/M) and cash flow yield(C/P), of Nepalese enterprises by estimating various models. The theoretical statement of the models is that the stock returns (R) may be regarded as subject to the constraints of earnings yield (E/P), size $\ln(ME)$. Book-to-Market equity ratio (B/M) and cash flow yield (C/P). The theoretical statement may be frame as under:

$$R = f(E/P, \ln(ME), B/M, C/P)$$

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

$$R = a + b_1 (E/P) + b_2 \ln (ME) + b_3 (B/M) + b_4 (C/P) + U_i$$

Where, dependent variable, R chosen for the study has been specified as under:

DY = Dividend yield or dividend per share to market price per share i.e. D_1/P_0 .

CY = Capital gain yield or, capital gain per share to market price per share i.e. $(\rho_1 - \rho_0)/\rho_0$

TY = Total yield or dividend per share plus capital gain per share to market price per share i.e. $\frac{(D_1 + P_1 - P_0)}{P_0}$

The independent variables are specified as under:

E/P = Earnings yield or earning per share to market price share.

$\ln (ME)$ = Size or natural logarithm of market capitalization.

(B/M) = Book value of equity per share to market value of equity per share.

(C/P) = Cash flow yield or earning per share plus depreciation expenses per share to market price per share.

U_i = Distribution or error term.

(b) Method of Analyzing the Summary Statistics for Portfolios Sorted by Fundamental Variables

The summary statistics are studied to examine the relationship between stock returns (i.e., dividend yield, capital gain yield and total yield) and fundamental variables (i.e. earnings yield, size, book to market equity ratio and cash flow yield) of Nepalese enterprises. This study is conducted at a portfolio level based on pooled cross-section analysis of 38 enterprises with 268 observations. The study sorts out all the sampled securities into four portfolios. The summary statistics for portfolios have been sorted by earnings yield, size, and book to market equity ratio and cash flow yield, viz., panel A, Panel B, Panel C, Panel D respectively.

The low to high ratios of different variables are provided in portfolios 1-4 for each panel. Forming more than four portfolios based on various ratios of fundamental variables would yield too few stocks per portfolio. In other words splitting stock into more than four portfolios reduces the sample sizes which would result the greater sampling error. For each portfolio, average ratios are computed.

In the first step, stocks are ranked by size in the table 3 and placed them into three groups. Group 1 contains stocks with size of less than 4.40 percent and accordingly group 2 and 3 each contains stocks ranked by increasing value of size. In other 5 tables, portfolios 1 to 3 are also formed according to the similar process.

(c) Statistical Tools

In the process of estimating above mentioned models in subsection A, various statistical tools have been used , e.g., coefficient of multiple determination(R^2), standard error of estimate (SEE), Student's t-statistics and F-statistics etc. in this study , the statistical parameters are calculated with the help of computer via SPSS for the models prescribed above. Brief explanations of statistical tools employed in this study are as follows:

Co-efficient of (Multiple) Determination (R^2)

The coefficient of multiple determinations is a measure of the degree (extent or strength) of linear association of correlation between two variables, one of which happens to be independent and other being depended variable(s). It measures the percentage total variation in dependent variable explained by independent variable (s). The value of the coefficient of multiple determination can range from zero to one (i.e. $0 \leq R^2 \leq 1$). If R^2 is equal to 0.90, it indicates that independent variables used in regression model explain 90 percent of the total variation in the dependent variable. A value of one can occur only if the unexplained variation is zero, which simply means that all the data points out in the scatter diagram fall exactly on the regression line. It is calculated as :

$$R^2 = \frac{\text{Explained Variation}}{\text{Total Variation}}$$

Statistics

It is used to test the validity of assumption if the sample size is less than 30. The computed value of t' is compared with the table value of t at certain level of significance for given degree of freedom. If the calculated value of t is greater than its table (critical) value, the difference is treated as significant at the level but if the calculated t' value is less than its table value, we infer the difference is not significant. The computed t' values are compared with its table values at 5 percent level of significance. To identify the significance of financial ratios with the stock returns, computed t' values are compared with its table value at 5 percent, level of significance.

Regression Constant (a)

It is also known that the numerical constant which determines the distance of the fitted line directly above or below the origin (i.e., Y-intercept). The value of the constant, which is 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 the entire variable omitted from the model.

Regression Coefficients ($b_1, b_2, b_3, \dots$)

The regression coefficient of each independent variable indicates the marginal relationship between that variables and value of dependent variable, holding constant effect of all other independent variables in the regression model. In other words, the coefficients describe how changes in independent variables affect the values of dependent variable's estimate. It is also known that the numerical constant which determines the change in dependent variable per unit change in independent variables (i.e. slope of line).

Standard Error of Estimate (SEE)

With the help of regression equations perfect prediction is practically impossible. Standard

error of an estimate is a measure of reliability of the estimating equation, indicating the variability of the observed points around of 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 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 is as a description of the average relationship between two series.

F-test

The Fisher's F-distribution is defined as a distribution of the ratio of two independent chi-square variables each dividend by the corresponding degree of freedom. It is clear that F-distribution has a single mode. Not that 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 sometimes called variance ratio test, is based on F-distribution. In order to test goodness of fit of the regression models, F test is used.

3.5 Limitations of the Study

The data problem is acute in Nepal. Even the financial statements of the companies published by them are not readily available since they are treated as confidential.

In order to make a study on fundamental analysis of Nepalese stock returns more fruitful, it is essential that data should be of frequent time intervals. Here again, such type of monthly or quarterly data could not be obtained and due to this study has been forced to use the annual data which are available in profit and loss accounts and balance sheets The use of annual data in this study is thus likely to make the conclusions somewhat less valid and less reliable. In the absence of monthly or quarterly data, many of approaches to this study could also not be employed. Due to this can not conduct the study like our base journal [Chan, Hamao and Lakonishok (1993)]. Nepal stock Exchange Ltd. publishes financial statements of some listed companies and it has also kept the financial statements and other information of some listed

companies in its web site addressed <http://www.nepalstock.com> to avail and ease information regarding stock market. But data of all the listed companies are not still available. NEPSE Ltd. is also unable to provide the required data of listed companies from the fear of listing. The same data provided by NEPSE Ltd., Securities Board, Nepal, and the individual companies sometimes also differ. It mars the accuracy and reliability of the data.

This study does not cover all the Nepalese companies. It, therefore, implies that the conclusions drawn are of a tentative nature and firm generalization should be avoided for the entire companies. Similarly, each of selected enterprises does not represent the entire industry in which it falls. But it does represent largely its industry groups. The study period begins from 1997/98 only. The earlier years are not considered as it will decrease the number of enterprises to be selected for this study. The regression results are based on pooled cross-section analysis of only limited observations for the selected enterprises. Besides that, the merits and demerits of various statistical tools employed also can not be ignored in this study.

3.6 Definition of Key Terms

The financial statements published by 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.

Fundamentals: The word “Fundamentals” used in this study refers to the group of independent variables that play the important roles in determining the stock returns.

Stock returns: “Stock returns”, in this study is defined in terms of dividend yield, capital gain yield and total yield.

Market price per shares (MPS): Market price per share is the price at which the shares are traded in the stock market. This study has used year end market price per share of each company over the study period which is determined in the Nepal Stock Exchange Ltd.

Net worth per share (NWPS): Net worth is the owners' equity in the company. It is also

known as book value of the company. It consists of equity capital, retained earnings, reserves and surplus. Net worth per share is the book value of each share.

Earning per share (EPS): Earning per share is the amount which is calculated by dividing the total earnings available to common stocks holders by the total number of shares outstanding

Dividend per shares (DPS): Dividend per share means the amount available to holders of each stock. It is the regular returns to investors on their investment provided by the company. It is calculated by dividing total dividend amount by number of shares outstanding.

Dividend yield (DY): Dividend yield is known as the rate of return as dividend. It is computed by dividing the year end dividend per share by the beginning stock price per share of the year.

Capital gain yield (CY): Capital gain yield means rate of return on investment as a result of changing the year end stock price of two year. Positive value of capital gain yield shows the positive rate of return where as negative value of capital gain yield indicates negative rate of return or capital loss.

Total yield (TY): Total yield constitutes dividend yield plus capital gain yield. It is the total rate of return on stock investment (Weston and Brigham 1996, 247).

Cross section: it is situational analysis. The words cross section used in this study refers to a study across different stocks for one time period by taking representative sample.

Earnings yield: it refers to earnings per share divided by market price per share.

Cash flow yield (C/P): it is earning per share plus depreciation expenses per share to market price per share.

Size ln (ME): size is defined as total market capitalization of individual enterprise. Total capitalization includes net worth plus long term debt. It is also known as capital employed.

Size is denoted in this study by $\ln(ME)$. I.e. natural logarithm of market capitalization denominated in million of rupees.

Book-to- market equity ratio (B/M): it is book value of equity per share to market value of equity per share at closing price.

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is fully devoted to analyzing the various issues of stock returns and fundamental variables. The analysis of summary statistics for portfolios sorted by fundamental variables has been described in section 1 while section 2 analyzes the properties of portfolios formed on dividend yield, capital gain yield, and total yield of Nepalese enterprises in the context of selected listed companies of Nepal. The purpose of this chapter is to carry out secondary as well as primary data analysis.

Most of theories and empirical studies concluded that there is relationship between fundamental variables and stock returns. In general, positive relationship has been observed between equity returns and earnings yield, cash flow yield and book to market ratio, and a negative relationship between equity returns and size, e.g., Basu (1977 , 1983), Banz (1981), Reinganum (1981), Cook and Rozeff (1984), Lakonishok and Shapiro (1986),.. among these fundamental variables considered, Chan, Hamao and Lakonishok (1991) found book to market value ratio and cash flow yield had most significant positive impact on expected returns. Basu (1983) found that the earning-price ratio (E/P) helps to explain the cross-section average returns on the US stocks. Banz (1981) documented that the stocks with larger market equity have lower returns. Stattman (1980), and Rosenberg, Reid and Lanstein (1985) found the average returns on the US stocks are positively related to the firm's book to market ratio. In this chapter the study attempts to find out the relationship between fundamental variables and stock returns and impact of fundamental variables with respect to stock returns.

4.1 Analysis of Secondary Data

In this section, summary statistics for portfolios are used to examine the overall relationships of dividend yield, capital gain yield and total yield with fundamental variables such as earnings yield, size, book to market value ratio and cash flow yield. Besides this, summary statistics for portfolios sorted four fundamental variables have been studied to determine the

relationships among fundamental variables themselves. Here we sort out all the securities into four portfolios. The summary statistics for four portfolios have been sorted out by earnings yield, size, and book to market value ratio and cash flow ratio are shown in Table 4.1, 4.2, 4.3 and 4.4, respectively. The low to high ratios of fundamental variables are provided in portfolios 1 to 4 for each table. For each portfolio, various ratios of dividend yield, capital gain yield, total yield, earnings yield, size, book to market value ratio and cash flow yield are computed. They are then classified according to above, and average ratios are computed.

Summary Statistics for Portfolios Sorted by Fundamental Variables

(Average yearly dividend yield (DY), capital gain yield (CY), total yield (TY), earnings to price (E/P) ratios, size In (ME) (i.e., natural logarithm of market capitalization), book to market (B/M) ratios, and cash flow to price (C/P, i.e., earnings plus depreciation divided by price) ratios, for portfolio sorted by the four fundamental variables over the period 1997/98 to 2007/08 of 38 enterprises with 268 observations. Figures in parentheses are standard deviations and N denotes the number of observations in each portfolio.)

Table 4.1: Summary Statistics for portfolio Sorted by Earnings to price (E/P) Ratio

Portfolios\base of portfolio	1(Low)<4.00	2 4.00 to10.00	3 10.00 to18.00	4 (High)>18.00
Dividend yield (percent)	0.60	2.69	4.96	30.30
	(1.11)	(2.58)	(4.98)	(11.50)
Capital gain yield (percent)	36.29	33.65	21.84	5.18
	(113.46)	(78.97)	(55.87)	(6.34)
Total yield (percent)	32.96	33.88	21.82	9.31
	(107.73)	(76.49)	(49.02)	(76.99)
E/P (percent)	-4.29	6.81	13.11	27.62
	(24.56)	(1.81)	(2.26)	(11.23)
B/M (Times)	1.31	0.50	0.77	1.34
	(8.26)	(0.32)	(0.34)	(1.28)
size In (ME)	6.74	6.63	4.74	4.31
	(1.75)	(1.73)	(1.26)	(1.09)
C/P (percent)	-2.07	8.82	15.32	30.30
	(24.42)	(3.39)	(3.35)	(11.50)
N	75	72	61	60

(Figures in parentheses are standard deviations and 'N' denotes the number of observations in each portfolio)

In Table 4.1, the portfolios sorted by earnings yield have been presented. The stocks with high earnings yield have higher dividend yield, but lower capital gain yield and lower total yield.

The average dividend yield increased from 0.60 percent for the low to 30.30 percent for the high portfolio. Similarly, the average capital gain yield decreased from 36.29 percent for the low to 5.18 percent for the high portfolio. The average total yields decreased from 32.96 percent for the low to 9.31 percent for the high. The stocks with higher earnings yield are less variable than that of low earnings yield. However, the dividend yield, for the high portfolio is more variable as compared to low earnings yield portfolio. Capital gain yield and total yield, for the low portfolio are more variable than high portfolio.

Further more, size variable is negatively correlated with earnings yield, where as book to market value ratio and cash flow yield are positively correlated with earnings yield. The average size decreased from 6.74 (log size) for the low to 4.31 (Log size) for the high earnings yield portfolio. Moreover, the size for the low portfolio is more variable than that of high earning yield portfolio. The average book to market value ratio increased from 1.31 times for the low to 1.34 times for the high earnings yield portfolio. Similarly the average of cash flow yield increased from -2.07 percent for the low to 30.30 percent. . However, both book to market ratio and cash flow yield for the low are more variable as compared to high earnings yield portfolio.

In Tables 4.2, the portfolios sorted by firm's size are presented. It shows that larger stocks have lower dividend yield. The average dividend yield decreased from 5.14 percent for the smallest to 2.59 percent for the largest portfolio. However, the dividend yield for the smallest portfolio is more variable as compared to largest portfolio. In contrast to the dividend yield larger portfolios have higher capital gain yield and total yield. The average of capital gain yield increased from 15.87percent for the smallest portfolio to 48.37 percent for the largest portfolio. Similarly, the average total yield increased from 18.36 percent for the smallest portfolio to 47.78 percent for the largest portfolio. Moreover, both capital gain yield and total yield for the smallest portfolio are more variable than that of largest portfolio.

Besides, the negative relationship of size has been observed with earnings yield, book to market value ratio and cash flow yield. The average earnings yield decreased from 15.06 percent for the lowest portfolio to 5.47 percent for the largest portfolio. Similarly, the average

of book to market value ratio decreased from 109.53 percent for the smallest to 25.03 percent for the highest portfolio. The average cash flow yield also decreased from 17.35 percent for the smallest portfolio to 6.92 percent for the largest portfolio. However, the earning yield, book to market value ratio and cash flow yield for the smallest portfolio are more variable than that of largest portfolio.

Table 4.2: Summary Statistics for portfolio Sorted by Size In (ME)

Portfolios\base of portfolio	1 (Low) <4.1	2 4.1 to 6.1	6.1 to 7.15	4 (High) >7.15
Dividend yield (percent)	5.14	2.27	2.29	2.59
	(5.62)	(3.45)	(3.73)	(3.58)
Capital gain yield (percent)	15.87	16.45	26.79	48.37
	(83.71)	(70.13)	(139.38)	(72.67)
Total yield (percent)	18.36	15.72	26.04	47.78
	(76.09)	(63.54)	(130.79)	(71.04)
E/P (percent)	15.06	6.72	6.00	5.47
	(11.87)	(27.90)	(6.28)	(3.37)
B/M (times)	2.65	0.80	0.58	0.25
	(10.81)	(0.57)	(0.27)	(0.14)
Size In (ME)	3.63	4.82	6.68	8.28
	(0.50)	(0.58)	(0.32)	(0.82)
C/P (percent)	17.35	9.15	9.01	6.92
	(12.53)	(27.70)	(7.51)	(4.54)
N	60	80	60	68

(Figures in parentheses are standard deviations and 'N' denotes the number of observations in each portfolio).

In Table 4.3, the portfolios sorted by book to market value ratio are presented. The portfolio stock having high book to market value ratio have higher dividend yield. The average dividend yield increased from 2.31 percent for the smallest portfolio to 3.31 percent for the largest portfolio. However the dividend yield for the largest portfolio is more variable than that of smallest portfolio. The stocks having high book to market ratio have lower capital gain yield and total yield. The average capital gain yield decreased from 59.66 percent for the smallest portfolio to 6.03 percent for the largest portfolio. Similarly, the average of total yield

decreased from 58.61 percent for the smallest portfolio to 8.61 percent for the largest portfolio.

Table 4.3 Sorted by Book to Market (B/M) Ratio

Portfolios Bases of portfolio	1 (Low <.30	2 0.30 to 0.60	3 0.60 to 0.90	4 (High >0.90
Dividend yield (percent)	2.31 (3.43)	2.53 (2.95)	3.54 (4.21)	3.31 (5.49)
Capital gain yield (percent)	59.66 (120.33)	35.52 (79.44)	3.48 (36.72)	6.03 (75.61)
Total yield (percent)	58.61 (117.41)	30.95 (72.29)	6.43 (33.25)	8.61 (70.52)
E/P (percent)	0.03 (26.97)	6.22 (10.68)	9.58 (7.71)	15.99 (14.28)
B/M (Times)	0.12 (0.24)	0.46 (0.10)	0.75 (0.09)	2.48 (9.18)
size ln (ME)	7.86 (1.50)	6.16 (1.43)	5.00 (1.12)	4.38 (1.01)
C/P (percent)	1.81 (26.62)	8.36 (11.04)	11.97 (7.99)	18.62 (14.80)
N	70	66	65	67

(Figures in parentheses are standard deviations and 'N' denotes the number of observations in each portfolio).

More over, both of capital gain yield and total yield for the smallest portfolio are more variable than that of largest portfolio. Among the fundamental variables, the positive relationship of book to market value has been observed with earnings yield and cash flow yield, where as negative relationship with size. The average of size decreased from 7.86 (Log size) for the smallest portfolio to 4.38 (Log size) for the largest book to market value portfolio.

More over size for the smallest portfolio is more variable than that of largest portfolio. In contrast to the size, the average earnings yield increased from 0.03 percent for the smallest portfolio to 15.99 percent for the largest portfolio. Similarly the average cash flow yield from 1.81 percent for the smallest portfolio to 18.62 percent for the largest portfolio. How ever

both of earnings yield and cash flow yield for the low are more variable as compared to high portfolio.

Table 4.4: Sorted by Cash Flow to Price (C/P) Ratio

Portfolios / Bases of portfolios	1(Low) <4.00	2 4.00 to 10.00	3 10.00 to 18.00	4 (High) >18.00
Dividend yield (percent)	0.48	1.88	4.39	5.12
	(0.92)	(2.09)	(4.54)	(5.86)
Capital gain yield (percent)	29.48	43.65	22.07	10.10
	(74.94)	(121.47)	(59.86)	(79.87)
Total yield (percent)	26.15	42.54	22.45	13.57
	(70.83)	(117.50)	(54.58)	(72.36)
E/P (percent)	-6.51	4.95	10.99	24.97
	(28.04)	(2.91)	(2.84)	(11.42)
B/M (Times)	1.20	0.41	0.73	1.21
	(9.56)	(0.26)	(0.36)	(1.17)
size In (ME)	6.77	6.91	5.18	4.47
	(1.89)	(1.54)	(1.56)	(1.20)
C/P (percent)	-5.04	6.71	13.39	28.52
	(27.63)	(1.63)	(2.14)	(10.97)
N	61	73	77	57

(Figures in parentheses are standard deviations and 'N' denotes the number of observations in each portfolio).

In Table 4.4, the portfolios sorted by cash flow yield are presented. The stocks having high cash flow yield have higher dividend yield. The average dividend yield increased from 0.48 percent for the smallest portfolio to 5.12 percent for the largest portfolio, and higher dividend yield for the largest portfolio is more variable as compared to smallest portfolio. However the stocks having high cashflow yield have lower capital gain yield and total yield. The average capital gain yield decreased from 29.48 percent for the smallest portfolio to 10.10 percent for the largest portfolio, similarly, the average of total yield decreased from 26.15 percent for the

smallest portfolio to 13.57 percent for the largest portfolio. More over, both of capital gain yield and total gain yield for the smallest portfolio are less variable than that of largest portfolio.

Among the fundamental variables, the cash flow yield is positively related to earnings yield and book to market value, and negatively related size .the earnings yield increased from -6.51 percent for the smallest portfolio to 24.97 percent for the largest portfolio. Similarly the average book to market value ratio increased from 1.20 percent for the smallest portfolio to 1.21 percent for the largest portfolio.

Regression of Dividend Yield on Fundamental Variables

The regression results of dividend yield on earnings yield, size, book to market value and cash flow yield are presented in Table 4.5. The first four models include one of the four independent variables at a time models 5 to 7 include various combinations of the fundamental variables and model 8 includes all the four fundamental variables simultaneously. The results of these alternative specifications deeply support the summary statistics for the portfolios presented in Table 4.1, 4.2, 4.3& 4.4. The results are as expected and encouraging and more or less similar to the results of Chan, Hamao and Lakonishok (1991) conducted in the context of Japanese stock market. Moreover, the results of size variable is similar to Banz (1981) and is more or less similar to earlier studies by Pradhan (1993), and Manandhar (1998) in the context of Nepal. The dividend yield is positively influenced by earnings yield, and cash flow yield and negatively influenced by size and book to market (B/M) ratio.

Specially, earnings yield, and cash flow yield have individually and reliably positive influence on dividend yield. While a reliably negatively association exists between dividend yield and size as well as dividend yield and book to market value.

In model 1 of table 4.5, the coefficient of earnings yield indicates that when 100 percent change in E/P causes 7 percent change in Dividend yield in positive direction. In model 4 of

table 4.5, 100 percent increase in C/P causes 6.5 percent increase in dividend yield and vice versa. The coefficient of C/P is significant at 1 percent level of significance for t-test, the F-

Table4.5: Estimated Relationship between Dividend Yield and Fundamental Variables

(The results are based on pooled cross-sectional data of 38 enterprises with 268 observations for the period of 1997/98 to 2007/08 by using linear regression model. The model is, $DY = a + b_1 (E/P) + b_2 \ln (ME) + b_3 (B/M) + b_4 (C/P) + U_i$. Where, DY, E/P, $\ln (ME)$, B/M and C/P are dividend yield, earnings yield, market capitalization, book to market ratio and cash flow yield respectively. Results for various subsets if in dependent variables are presented as well.)

Models	intercept		Regression Coefficients of			R2	SEE	F
		E/P	ln (ME)	B/M	C/P			
(1)	2.39	0.07				0.079	3.97	22.13*
	(8.93)*	(4.70)*						
(2)	4.98		-0.35			0.025	4.09	6.68
	(5.90)*		(-2.58)***					
(3)	2.92			-0.032		0.001	4.13	0.34
	(11.19)*			(-0.58)				
(4)	2.24				0.065	0.078	3.96	23.08*
	(7.99)*				(4.80)*			
(5)	3.90	0.60	-0.25			0.092	3.95	13.02*
	(4.57)*	(4.35)*	(-1.85)**					
(6)	4.09	0.06	-0.27	-0.057		0.096	3.95	9.06*
	(4.69)*	(4.35)*	(-1.99)**	(-1.07)				
(7)	3.88		-0.26	-0.057	0.061	0.098	3.95	9.26*
	(4.39)*		(-1.90)***	(-1.07)	(4.42)			
(8)	3.89	0.005	0.26	-0.057	0.056	0.098	3.96	6.92*
	(4.28)*	(0.07)	(-1.9)***	(-1.07)	(0.73)			

Source: Annual report of SEBON

Notes: 1. Figures in parentheses are t-values.

2 The signs *, ** and *** denote that the results are significant at 1 percent, 5 percent and 10 percent level of significance respectively.

Value of the regression equation at 1 percent level of significance. Model 5 attempts to unravel the separate influence of earnings yield and size on dividend yield. The t-statistics suggests that the coefficients are estimated with a high degree of precision. The variables do not dominate each other. Adding the book to market value ratio as the third independent variables in model 6 doesn't rob the predicting power of earning yield, and size. In model 7, earnings yield replaced by the cash flow yield measure. Size may be more informative than other two variables... In model 8, when all the fundamental variables are simultaneously included, the coefficient of $\ln(\text{ME})$ is significant at 10 percent level of significance and other coefficients are insignificant except intercept (constant). But, overall regression equation is significant at 1 percent level of significance interpreted by the help of F- test. One unit increase in $\ln(\text{ME})$ causes 0.26 unit decrease in dividend yield, when other variables (i.e. E/P, B/M, and C/P) are kept constant.

Regression of Capital Gain Yield on Fundamental Variables

Table 4.6 presents the regression results of various models of capital gain yield on earnings yield, size, and book to market value and cash flow yield. The overall results show the positive relationship of capital gain yield with earnings yield and size, whereas, negative relationship with book to market value and cash flow yield. It may be due to more fluctuations in capital gain yield than other variables.

The t-statistics suggest that the size coefficients are more significant and, therefore, have higher predictive power than other variables. In model 2 of above table, when one unit increase in $\ln(\text{ME})$ causes 6.98 unit increase in capital gain yield. In model 8, when all the fundamental variables are simultaneously included, all t-statistics are found to be significant except for book to market ratio. There fore, book to market ratio may not play important role in predicting capital gain yield than others. The models 1 and 4 are not good fitted as indicated by insignificant F-statistics. The coefficients of multiple determinations (R^2) also do not support the models as they are unable to explain even 1 percent of the total variation in capital gain yield. Due to the difference in specifications of the models, the models estimated are generally poor as revealed by F-statistics and coefficients of multiple determinations (R^2).

Table 4.6: Estimated Relationship between Capital Gain Yield and Fundamental Variable

(The results are based on pooled cross-sectional data of 38 enterprises with 268 observations for the period of 1997/98 to 2007/08 by using linear regression model. The model is, $CY = a + b_1 (E/P) + b_2 \ln (ME) + b_3 (B/M) + b_4 (C/P) + U_i$. Where, CY, E/P, $\ln (ME)$, B/M, and C/P are capital gain yield, earnings yields, natural logarithm of market capitalization, book to market ratio and cash flow yield respectively. Results for various subsets of independent variables are presented as well.)

Models	intercept	Regression coefficients of				R2	SEE	F
		E/P	$\ln (ME)$	B/M	C/P			
(1)	28.12 (4.37)*	0.05 (0.015)				0.00	89.53	0
(2)	-13.83 (-0.71)		6.98 (2.27)**			0.022	88.52	5.15
(3)	28.99 (4.78)*			-0.84 (-0.71)		0.002	89.43	0.50
(4)	29.24 (4.35)*				-0.11 (-0.35)	0.001	89.51	0.12
(5)	-16.18 (-.79)	0.14 (0.41)	7.3 (2.30)**			0.023	88.68	2.65
(6)	-14.72 (-7.1)	0.14 (0.41)	7.03 (2.21)**	-0.40 (-0.34)		0.024	88.86	1.80
(7)	-13.01 (-0.62)		6.86 (2.15)**	-0.4 (-0.34)	0.03 (0.09)	0.023	88.89	1.74
(8)	-2.21 (-0.10)	3.39 (1.83)***	6.23 (1.95)**	-0.42 (-0.36)	-3.29 (-1.78)***	0.038	88.43	2.15

Source: Annual report of SEBON

Notes: 1. Figures in parentheses are t-values.

2 The signs *, ** and *** denote that the results are significant at 1 percent, 5 percent and 10 percent level of significance respectively.

Regression of Total Yield on Fundamental Variables

Table 4.7 presents the regression results of total yield on earnings yield, size, book to market value and cash flow yield. The alternative specifications of the models reveal the positive relationship of total yield with earnings yield and size, where as, negative relationship of total yield with book to market value and cash flow yield.

Table 4.7: Estimated Relationship between Total Yield and Fundamental Variables

(The results are based on pooled cross-sectional data of 38 enterprises with 268 observations for the period of 1997/98 to 2007/08 by using linear regression model. The model is, $CY = a + b_1(E/P) + b_2 \ln(ME) + b_3(B/M) + b_4(C/P) + U_i$. Where, CY, E/P, $\ln(ME)$, B/M, and C/P are capital gain yield, earnings yields, natural logarithm of market capitalization, book to market ratio and cash flow yield respectively. Results for various subsets of independent variables are presented as well.)

Models	Intercept	Regression Coefficients of				R ²	SEE	F
		E/P	$\ln(ME)$	B/M	C/P			
(1)	26.96 (4.78)*	0.042 (0.14)				0.00	83.5	0.021
(2)	-12.56 (-0.73)		6.75 (2.45)**			0.023	82.68	6.02**
(3)	28.05 (5.33)*			-0.82 (-0.74)		0.002	83.41	0.55
(4)	27.87 (4.72)*				-0.059 (-0.21)	0.00	83.50	0.043
(5)	-15.73 (-0.88)	0.17 (0.61)	7.06 (2.52)**			0.024	82.79	3.19**
(6)	-14.39 (-0.79)	0.18 0.61	6.89 (2.43)**	-0.40 (-0.36)		0.025	82.93	2.16
(7)	-12.99 (-7)		6.75 (2.37)**	-0.40 (-0.36)	0.08 0.29	0.024	82.97	2.06
(8)	-4.74 (0.25).	2.95 (1.82)***	6.36 (2.24)**	-0.41 (-0.37)	-2.8 (-1.74)***	0.042	82.49	2.78
						0.36	82.60	2.39

Source: Annual report of SEBON

Notes: 1. Figures in parentheses are t-values.

2 The signs *, ** and *** denote that the results are significant at 1 percent, 5 percent and 10 percent level of significance respectively

Table 4.7 presents the regression results of total yield on earnings yield, size, book to market value and cash flow yield. The alternative specifications of the models reveal the positive relationship of total yield with earnings yield and size, whereas, negative relationship of total yield with book to market value and cash flow yield. Model 1 provides insignificant relationship between total yield and earnings yield.

In model 2 of the above table, the coefficients of size indicated that 1 unit increase in $\ln(ME)$ causes 6.75 unit increases in total yield. The coefficient of $\ln(ME)$ is significant at 5 percent

level of significance for t- test. The F- value of the regression equation is also significant at 5 percent level of significance. Similarly model 2,5,6,7 and 8 indicate the significant relationship between total yield and size. In model 8, all the fundamental variables are simultaneously included, then only book to market ratio has been found to be insignificant. Of the four variables considered, size has higher explanatory power than other variables as indicated significant relationship between total yield and size by the models, 2, 5,6 and 8. the cash flow yield is found to be weak in determining the total yield. F- Statistics and coefficients of multiple determinations (R^2) suggest that the model 1, 3 and 4 may not provide the validity of the results.

The overall results of this section may be summarized as follows:

- Earnings yield, cash flow yield have significant positive impact on dividend yield, and book to market value has insignificant impact, where as , size has negative impact on dividend yield. In the case of earnings yield and cash flow yield, both have strong predictive power on dividend yield.
- Capital gain yield is positively influenced by earnings yield and size, where as, negatively influenced by book to market value and cash flow yield. size has been found to be statistically strong in predicting capital gain yield
- Similarly, total yield is positively determined by earnings yield and size, whereas, negatively determined by book to market value and cash flow yield. Size has been found to be more informative than other variables , and ,
- Table 4.1, 4.2, 4.3&4.4 exhibit the positive relationship among earnings yield, and cash flow yield, where as, size and book to market ratio are negatively related to these three variables.

Correlation Analysis

Table 4.8 shows the correlation matrix of the fundamental variables and returns of sampled enterprises. An earnings yield is strong positive correlated with cash flow yield (.984) and dividend yield (.281) and earnings yield is positively correlated with Book to market ratio

Table 4.8 Correlation Matrix

		E/P	B/M	LS	C/P	DY	CY	TY
E/P	Pearson Correlation	1	0.033	-.180(**)	.984(**)	.281(**)	0.001	0.009
	Sig. (2-tailed)		0.596	0.004	0	0	0.988	0.886
B/M	Pearson Correlation		1	-.161(**)	0.035	-0.036	-0.047	-0.046
	Sig. (2-tailed)			0.009	0.575	0.563	0.48	0.458
LS	Pearson Correlation			1	-.196(**)	-.159(*)	.150(*)	.151(*)
	Sig. (2-tailed)				0.002	0.01	0.024	0.015
C/P	Pearson Correlation				1	.286(**)	-0.023	-0.013
	Sig. (2-tailed)					0	0.73	0.836
DY	Pearson Correlation					1	-0.094	-0.052
	Sig. (2-tailed)						0.158	0.404
CY	Pearson Correlation						1	.999(**)
	Sig. (2-tailed)							0
TY	Pearson Correlation							1
	Sig. (2-tailed)							

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

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

(.033), capital gain yield (.001) and total yield (.009). But it is negatively correlated with Size (-.180). Book to market ratio is positively correlated with earnings yield and cash flow yield (.035). But there is strong negative correlation between book to market and size (-.161) and its significance level is 0.01. Book to market ratio is negative correlated with dividend yield (-.036), capital gain yield (-.047) and total yield (-.046). Regarding firm size there is strong negative correlation with earnings yield, book to market ratio, cash flow yield (-.196), and dividend yield (-.0159). Size is positively correlated with capital gain yield (0.150) and total yield (0.151) at the 0.05 level of significance. Cash flow yield is positive correlated with earnings yield and dividend yield (.286) at 0.01 level of significance. Cash flow yield negatively correlated with size, capital gain yield (-.023) and total yield (-.013). Dividend yield is negatively correlated with capital gain yield and total yield. There is strong positive correlation between capital gain yield and total yield at 0.01 level of significance. And weak negative correlation between total yield and dividend yield.

Having analyzed the secondary data, the next section is devoted to primary analysis.

4.2 Analysis of Primary Data

This section contains the analysis of respondents' opinions regarding the fundamental analysis of Nepalese stock returns of NEPSE listed companies, collected through questionnaire survey. Data collected from secondary sources usually have certain limitations. In order to verify the reliability and validity of secondary data results, it would be useful to conduct a survey practitioner. Only quantitative data analysis is not sufficient so that qualitative data analysis also become important. After scanning various secondary data sources, primary data is collected for meeting the specific objective of this study. The responses collected from the respondents are analyzed in order to gain an insight into the opinion of Nepalese executives and finance officers on the analysis of stock returns. The results of the same is analyzed and presented under this section.

First sub-section explains the opinions about the variables which affect returns, relationship between variables and returns. In second subsection respondents views on performance measurement power of variables on stock returns and companies are analyzed. In sub-section

three. Respondents' belief about the 'trading practice and stock price determination in NEPSE', importance of external environment and the answers of open-ended question on fundamental analysis of Nepalese stock returns are examined in sub-sections four, five and six respectively

The financial executives selected for the purpose of this study included such positions as finance managers, chief accountants, account officers, accountants, and general managers, managing directors and finance practitioners too. It was based on interview collected for financial executives. The following is the qualitative analysis relating to major aspects of stock returns in Nepalese context.

Factors Affecting Returns

With respect of factors affecting returns, the majority of respondents indicated that 'earnings yield' is the major important factor. The other important factors are revealed to be 'book-to-market equity ratio', 'dividend payouts ratio', 'size of the companies'. These findings are more or less similar to the findings of Davis (1994) and qualitative analysis undertaken in this study.

Effect of Earnings on Stock Returns

The questionnaire with the financial executives revealed that the earnings yield mainly affects the returns. With respect to whether the enterprises having higher earnings yield will have higher dividend payout, the majority of respondents stated that higher earnings yield would result in higher dividend payout. The majority of the respondents indicated that the higher earnings yield leads to higher capital gain yield. These findings are consistent with the findings of Basu (1983), Bal (1978) and Davis (1994) in the developed capital market as well as Pradhan (2004) in the Nepalese context.

Effect of Fundamental Variables on Financial Performance of Companies

With respect to effect of fundamental variables over the performance of Nepalese companies, the respondents gave the first priority to 'Earnings yield', they indicated that earnings yield have higher performance measurement power than book-to-market equity ratio. Secondly, they viewed that dividend payout ratio is an effective measures than cash flow yield. And lastly, the respondents viewed that book-to-market equity ratio is an effective than the size of companies. These all findings are more or less similar to the findings of Pradhan (2004) in the context of Nepal and quantitative analysis of this study.

Size Effect on Returns

With respect to size-effect on returns, majority of the respondents felt that the large sized enterprises would not generate higher returns. The questionnaire with the financial executives revealed that the large sized enterprises would generate lower returns. Majority of the respondents indicated that the negative relation exists between stock returns and size. This finding is consistent with the finding of Banz (1981) in the developed capital market.

Performance of Stock Returns

As regard to the performance of stock returns, majority of the respondents stated that most important factors affect the performance of the returns is earnings yield. The second important factor which affect on returns is book to market ratio and the third one is, size of the enterprises which negatively affects returns.

Practices on Nepal on Stock Price Determinants

The respondents were provided some common statements regarding share price determination of NEPSE listed companies and they were asked how much they are agree regarding these statements. Majority of the respondents strongly agreed on Future price movements of the stock can be predicted by analyzing the historical price changes and volume of transactions. Most of the respondents were agreed on the statement that stock price

prediction is possible by estimating and analyzing the fundamental facts of the company. All the respondents were strongly agreed on Earning of firm is considered as important factor in stock pricing. So far as price movement is concerned. We found dual viewed of respondents 46 percent of the total respondent informed they did not know and rest of the respondent strongly disagreed on statement that the price movement is purely random, the future prices of stocks can not be predicted at all.

Analyzing the Answers to Open-ended Question on a Fundamental Analysis of Nepalese Stock Returns

The respondents were also asked to give their opinion on fundamental analysis of Nepalese stock returns in one open-ended question included in the questionnaire. Out of 25 respondents, only 15 of them give their views for the issue. Some respondents admired that it is better to considered fundamental factors of stock returns. All of the respondents raised the issue of administrative part of Nepalese stock market. Majority of them indicated the need of financial analysts and advisors to guide the investors to take proper investment strategy.

In this open-ended question, some respondents viewed that the regulating authorities are not serious to protect the small investors from unwarranted manipulation of stock prices practiced by the large investors with the help of brokers. The remaining responses to this open-ended question varied among investors to investors. The Nepalese stock market is growing satisfactorily, however the regulating mechanism is not strong enough to order the market.

4.3 Concluding Remarks

To sum up, Fundamental analysis of stock returns in Nepal reveals that annual stock returns during the 1996-2008 periods were positively related to earnings yield and cash flow yield and negatively related to size but not significantly related to book to market equity ratio. Capital gain yield and total yield have been negatively influenced by book to market equity ratio and firms size. In secondary data analysis of the study size has been found to be statistically strong in predicting stock returns.

In essence, the overall results of primary data analysis give the impression that the Nepalese stock market is not efficient in its weak form. Respondents believe that the stock prices are not random and future prices can be estimated by analyzing the historical information; the notion clearly provides the evidence of market inefficiency. The analysis of the open-ended question gives the impression that, the related stakeholders are much worried about administrative aspect of security market. Raising the administrative issues of the NEPSE, majority of the respondents indicated the need of financial analysts and advisors, who can guide the investors for appropriate investment strategy.

CHAPTER - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Stock market serves as a link between suppliers and users of capital funds. It is a mechanism for mobilization of public savings and channelizing them in productive investments. (Gupta: 1978, 325). In order to enhance the role of stock market in economic activities, it is essential to flow financial resources easily and in a simple manner which would, in turn, help to achieve desired results from the economic development of the country. It is possible only when there is existence of developed and healthy stock market in the country. Investors in general, expect two kinds of returns on stock investment in the form of dividends and capital gains (i.e., stock price appreciation). Rational investors consciously examine the behavior of stock returns with different fundamental variables and then invest their funds in efficient portfolios from which they can realize higher rate of return.

This study mainly aims at examining the relationship between stock returns (i.e., dividend yield, capital gain yield, and total yield) and fundamental variables (i.e., earnings yield, size, book to market equity ratio, and cash flow yield) in the context of Nepalese stock market. The specific objectives of this study are as follows (1) to analyze the significant relation between fundamental variables and stock returns in Nepal.,(2) to examine if dividend yield, capital gain yield , and total yield are related to earnings yield, size, book to market ratio, and cash flow yield.,(3) to measure the effect of fundamental variables on stock returns of the Nepalese companies.,(4) to estimate the summary static's for portfolios sorted by earnings yield, size, book to market equity ratio and cash flow yield.,(5) to analyze the properties of portfolios formed on dividend yield, capital gain yield and total yield of Nepalese enterprises.

This study is based on primary as well as secondary data. In order to conduct the study, the necessary data on stock returns, fundamental variables and other related variables were collected from the annual report of SEBO/N: <http://www.sebonp.com>. And NEPSE Ltd.:<http://www.nepalstock.com>. Besides these other necessary data and information

regarding stock market were collected by visiting the various institutions (e.g. NEPSE Ltd., SEBON, NRB, Ministry of Finance etc). The 38 enterprises out of 142 enterprises listed in NEPSE Ltd. are selected for the study

This study applied pooled cross-sectional data analysis of 38 enterprises with 268 observations. For the period of 1998/99 to 2008/09, the summary statistics for portfolios sorted by fundamental variables such as earnings yield, size, and book to market equity ratio and cash flow yield are estimated to examine the overall relationship between stock returns and fundamental variables. The sampled securities are grouped in to portfolios. Further more, various regression models and possible alternative statistical specifications have been provided to confirm the relationship and for the robustness of the results. All the regression results are obtained via SPSS computer programmed. In this study, the results are tasted at 1 percent and 5 percent levels of significance.

Major Findings

The study of role and impact of fundamental variables on dividend yield, capital gain yield and total yield reveals the following major findings:

- The overall results reveal the positive relationship of dividend yield with earnings yield, and cash flow yield, where as negative relationship with book to market ratio and size. Of the four variables considered, earnings yield has been found to have strong explanatory power in predicting the dividend yield than other variables.
- There is positive relationship of capital gain yield with earning yield and size, whereas, negative relationship with book to market value of equity ratio and cash flow yield.
- Total yield is positively related to earnings yield and size, whereas, negatively related to book to market equity ratio and cash flow yield. Of the four variables considered, the statistical evidences provide the robust results of size. In contrast, book to market value equity ratio variable has not significant impact on total yield. Firm's book to

market equity ratio may not play important role in predicting total yield as compared to other variables.

Other things remaining the same, the major findings from the study of summary statistics for portfolios sorted by earnings yield, size, and book to market equity ratio and cash flow yield can be summarized as follows:

- The stocks with higher earnings yield have higher dividend yield, book to market equity ratio, and cash flow yield. In contrast, stocks with high earnings yield have lower size, capital gain yield. However, capital gain yield, total yield, book to market equity ratio, and cash flow yield for the low earnings yield portfolio are more variables as compared to high portfolio, while, size for the low earnings yield portfolio is more variables than that of high portfolio.
- The large sized companies have lower dividend yield, earnings yield, book to market ratio, and cash flow yield, while , higher capital gain yield, and total yield. However, dividend yield, earnings yield, book to market ratio and cash flow yield for the small sized companies are more variable than that of large sized companies, while both of capital gain yield and total yield for the small sized companies are more variable than that of large sized companies.
- The stocks having high book to market equity ratio have higher dividend yield, earnings yield, and cash flow yield, where as lower capital gain yield and total yield and size. However earnings yield, cash flow yield for the low book to market equity ratio portfolio are more variable as compared to high portfolio, while, capital gain yield and total yield and size for the low are more variable as compare to high portfolio. In contrast, dividend yield for the high portfolio is more variable than low portfolio.
- The stock having high cash flow yield have higher dividend yield , earnings yield, and book to market equity ratio, whereas, lower capital gain yield, total yield and size.

However, dividend yield, capital gain yield, and total yield for the high are more variables than that of high portfolio, while earnings yield, size, and book to market equity ratios for the low cash flow yield portfolio are more variable than that of high portfolio.

- Among others, dividend yield has been observed significant positively related to earnings yield, and cash flow yield, where as, negatively related to size and book to market equity ratio.
- Among others, capital gain yield is positively related to earnings yield and size, whereas, negatively related to book to market equity ratio and cash flow yield. Size is more significant and has a higher predictive power than other variables. There fore size may play important role in predicting capital gain yield.
- There is positive relationship of total yield with earnings yield and size, where as negative relationship with book to market equity ratio and cash flow yield. Among the four variables, size has been found to have strong impact on total yield,
- The positive relationship exist among earnings yield, and cash flow yield, where as, size and book to market ratio are negatively related to these three stock returns.

5.2 Conclusions

The major conclusion of this study reveal a significant relation between returns in the Nepalese market and four fundamental variables- earnings yield, size, book-to-market ratio and cash flow yield. Earnings yield and cash flow yield have significant positive impact on dividend yield and insignificant negative impact on book to market value, whereas, size has negative impact on dividend yield. Capital gain yield positively influenced by earnings yield and size whereas, the same is negatively influenced by book-to-market value and cash flow yield. Similarly total yield positively determined by earnings yield and size, whereas, the same is negatively influenced by book-to-market value and size.

The study also concludes that positive relationship exists among earnings yield, book to market value and cash flow yield. However, the size is negatively related to these three variables. Size has been found statistically stronger among four variables to predict returns in this study. This is similar to Banz (1981).

5.3 Recommendations

Based on the data analysis and major findings, the following suggestions and recommendations are made.

- As stocks with higher earnings yield have higher dividend yield, the enterprises should try to maximize earnings to satisfy the dividend needs of common stock holders.
- The study indicates that book-to-market equity ratio is negatively related to total yield. Hence, Nepalese enterprises should attempt to maintain the lower book-to-market equity ratio for the higher returns on stock.
- This study finds the evidence that the current market price per share in Nepalese capital market has not represented the intrinsic value. This finding helps investors to identify stocks that are mispriced, thus, creating opportunity for total yield in excess of what is required to compensate them for risk.
- This study indicates that lower the book-to-market equity ratio, higher would be the return on net worth. Hence, to increase the return on net worth, the enterprises should contribute their efforts to decrease the book-to-market equity ratio.
- The companies with higher stock returns are not able to provide stable returns. Their stock returns are more variable. There fore attempt should be made to achieve stability in returns

NEPSE Ltd. could not make financial statements available of all listed companies. NEPSE Ltd. should delist these companies which do not submit financial statement on time. Recent step is commendable.

- Attempt should be made to encourage the companies to get them listed in NEPSE Ltd. number of companies should be increased. Incentives should be given for listing.
- Listing is popular in financial sectors only. Other sectors should be encouraged, e.g., manufacturing, hotels, trading and airlines etc.
- Monitoring system for the listed companies should be promulgated properly.
- Creation in the asymmetry of information between insiders and outsiders, dissemination of information is essential to gain the public confident. Especially non-banking sectors industries are never disseminating information timely and regularly, price sensitive information should be disseminated.
- Government should be insight on market imperfections.
- Foreign portfolio investment should be welcomed.
- Brokers should be encouraged to generate their business from outside the Kathmandu valley.
- Investors' education, awareness, confidence towards stock market should be uplifted for providing various booklets, bulletins, with regular publication.
- General investors should be encouraged to invest in non-banking sectors. So the public confident should be gained providing assurance that non- banking companies also can provide ample amount of return increasing their profitability. The accounting standards need to be setup. Regular monitoring of these organizations is essential.
- Development of institutional investors is essential. This is because institutional investors posses knowledge and money. Individual investors cannot stabilize the market.
- HMG/N has adopted the policy of opening up of secondary market for the foreign investors. So all the required amendments in the concerned act are to assure the safety of investment and also for easy repatriation of investment as well as dividend.

5.4 Direction for Future Research

Furthermore, there are several avenues for future research in the area of effect of yields, earnings to price, and dividends on financial performance of Nepalese companies. One extension of the present study is to examine the effect of fundamental variables on financial performance of different industries. A second research avenue is to make the study by adding more companies the sample and expanding study parts. A third avenue of research is to estimate better model in explaining the effect of returns with other fundamental variables from the recent models available in the literature. Finally, an important direction of research is to survey the opinion of financial executives, financial experts and shareholders on effect of fundamental variables on financial performance of Nepalese companies by increasing the sample size.

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Appendix I
Questionnaire Used for Primary Data Collection

Opinion Questionnaire

A Survey of Fundamental Analysis of Stock Returns in Nepal

Name (optional):

Designation:

Institution:

- 1) Which of the following factors, do you think mainly affect returns?
(a) Size (Market capitalization) (b) Earnings yield
(c) Dividend payout ratio
- 2) Do you think that the enterprises having higher earning yield have higher dividend payout?
(a) Yes (b) No (c) Don't know
- 3) Which of the following variables, in your opinion, would have higher performance measurement power of companies?
(a) Earnings (b) Size of enterprises
(c) Book-to-market equity ratio (d) Dividend payouts ratio
- 4) In your opinion, what kind of relation exists between stock returns and size?
(a) Positive relationship (b) Negative relationship
(c) Depends upon situation of companies
- 5) Enterprises having higher earnings yield would generate higher capital gain yield?

(a) Yes (b) No (c) Don't know
- 6) Which fundamental variables mainly affect the performance of stock returns? (Please rank in order of their effectiveness by assigning 1 to most important one and so on)
(a) Book-to-market equity ratio. ()
(b) Dividend payouts ratio ()

- (c) Earnings yield ()
- (d) Size ()
- (e) Cash flow yield. ()

7) Please specify how far do you agree or disagree with following statements.

(Make a tick-mark on appropriate box as per following scheme for each statement)

1 = strongly agree

2 = Agree

3 = Do not know

4 = Disagree

5 = Strongly Disagree

S. N.	Statements	1	2	3	4	5
a.	Future price movements of the stocks can be predicted by analyzing the historical price changes and volume of transactions.					
b.	The stock price prediction is possible by estimating and analyzing the fundamental facts of the company like expected future earnings, cash flows, dividends, book to market ratio, size etc).					
c.	Insiders' information can be used to forecast the prices and beat the market.					
d.	As the price movement is purely random, the future prices of stocks can not be predicted at all.					

8) In your opinion, would the large sized enterprises generate higher returns?

(a) Yes

(b) No

(c) Don't know

9) Is there any relation of external environment with dividend yield, Capital gains yield and total yield?

(a) Yes

(b) No

(c) Don't know

S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
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9) Any other remarks (comments):

.....

.....

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Thank you!

1	NABIL	1997/98	10.35	0.51	7.43	13.93	6.98		6.98
2	NABIL	1998/99	9.69	0.34	7.92	13.31	7.14	62.79	69.93
3	NABIL	1999/00	5.98	0.17	8.61	7.77	3.93	100.00	103.93
4	NABIL	2000/01	3.95	0.15	8.68	5.70	2.67	7.14	9.81
5	NABIL	2001/02	7.52	0.32	8.19	12.93	2.72	-51.00	-48.28
6	NABIL	2002/03	11.52	0.36	8.19	16.29	6.80	0.00	6.80
7	NABIL	2003/04	9.26	0.30	8.50	13.89	6.50	36.05	42.55
8	NABIL	2004/05	7.01	0.22	8.91	10.91	4.65	50.50	55.15
9	NABIL	2005/06	5.77	0.17	9.31	8.35	3.79	48.84	52.63
10	NABIL	2006/07	2.71	0.08	10.12	3.76	1.98	125.45	127.43
11	SCB	1997/98	16.00	0.48	7.54	17.38	8.64		8.64
12	SCB	1998/99	9.11	0.24	8.28	9.84	6.88	43.46	50.34
13	SCB	1999/00	5.82	0.15	8.82	6.27	5.04	70.83	75.86
14	SCB	2000/01	6.01	0.16	8.89	6.68	4.74	6.35	11.08
15	SCB	2001/02	9.11	0.23	8.57	9.64	6.45	-26.58	-20.12
16	SCB	2002/03	9.10	0.25	8.62	10.32	6.71	5.81	12.51
17	SCB	2003/04	8.23	0.23	8.79	9.24	6.30	6.40	12.71
18	SCB	2004/05	6.12	0.18	9.08	6.87	5.12	34.38	39.50
19	SCB	2005/06	3.80	0.12	9.56	3.91	3.71	60.98	64.69
20	SCB	2006/07	2.84	0.09	10.10	2.91	0.17	56.29	56.46
21	SCB	2007/08	1.93	0.06	10.75	1.99	1.90	15.76	17.67
22	NIB	1997/98	11.56	0.45	6.70	12.38	8.33		8.33
23	NIB	1998/99	4.11	0.33	7.01	4.75	3.65	37.00	40.65
24	NIB	1999/00	3.83	0.20	7.55	4.32	1.78	70.44	72.22
25	NIB	2000/01	2.89	0.24	7.57	3.34	0.00	-17.92	-17.92
26	NIB	2001/02	4.42	0.41	7.16	5.09	0.00	-33.91	-33.91
27	NIB	2002/03	4.98	0.27	7.54	5.48	2.52	4.61	7.12
28	NIB	2003/04	5.50	0.26	7.93	6.33	1.60	18.24	19.83
29	NIB	2004/05	4.91	0.25	7.77	5.61	1.56	-14.89	-13.33
30	NIB	2005/06	4.71	0.19	8.91	5.24	2.78	57.50	60.28
31	HBL	1997/98	14.62	0.34	6.81	15.92	6.45		6.45
32	HBL	1998/99	8.61	0.21	7.09	9.30	5.00	29.03	34.03
33	HBL	1999/00	4.89	0.11	8.31	5.84	2.94	70.00	72.94
34	HBL	2000/01	6.24	0.14	8.41	6.74	1.70	-11.76	-10.06
35	HBL	2001/02	6.03	0.22	8.01	6.63	2.50	-33.33	-30.83
36	HBL	2002/03	5.92	0.30	8.18	6.56	0.16	-16.40	-16.24
37	HBL	2003/04	5.84	0.29	8.39	6.61	0.00	0.48	0.48
38	HBL	2004/05	5.21	0.26	8.48	5.84	1.26	9.52	10.78
39	HBL	2005/06	5.39	0.21	9.05	5.90	2.73	19.57	22.29

Appendix II

S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
40	HBL	2006/07	3.45	0.15	9.57	3.81	0.85	60.00	60.85
41	EBL	1997/98	11.34	0.58	4.42	12.24	0.00		0.00
42	EBL	1998/99	19.65	1.13	6.19	22.69	14.02	-41.85	-27.83
43	EBL	1999/00	3.51	0.17	7.07	4.13	0.00	815.89	815.89
44	EBL	2000/01	4.21	0.19	6.98	4.75	0.00	-23.47	-23.47
45	EBL	2001/02	25.32	1.16	6.43	28.30	0.00	-82.67	-82.67
46	EBL	2002/03	26.00	1.31	7.07	31.38	17.39	-11.54	5.85
47	EBL	2003/04	6.70	0.25	7.67	7.62	2.94	491.30	494.25
48	EBL	2004/05	4.31	0.25	7.92	4.85	0.00	27.94	27.94
49	EBL	2005/06	3.32	0.16	8.56	3.68	1.81	58.51	60.32
50	EBL	2006/07	3.23	0.12	9.13	3.53	0.41	76.21	76.63
51	EBL	2007/08	2.93	0.10	9.38	3.24	0.64	28.89	29.53
52	SBI	1997/98	44.70	1.46	4.00	47.17	18.18		18.18
53	SBI	1998/99	2.40	0.32	4.80	3.01	1.72	429.09	430.81
54	SBI	1999/00	3.52	0.16	6.00	3.82	1.27	103.61	104.87
55	SBI	2000/01	0.58	0.11	6.15	0.79	0.00	26.58	26.58
56	SBI	2001/02	2.40	0.33	6.36	2.70	0.00	-73.27	-73.27
57	SBI	2002/03	4.50	0.53	7.00	5.75	3.14	-36.41	-33.27
58	SBI	2003/04	4.64	0.48	7.19	5.79	0.00	20.39	20.39
59	SBI	2004/05	3.97	0.48	7.28	5.03	0.00	9.12	9.12
60	SBI	2005/06	2.98	0.25	8.29	3.45	0.01	82.69	82.69
61	SBI	2006/07	3.35	0.15	8.94	3.99	1.07	92.16	93.23
62	SBI	2007/08	1.87	0.11	9.49	2.32	0.00	28.49	28.49
63	BOK	1997/98	-8.96	0.88	5.41	-4.73	0.00		0.00
64	BOK	1998/99	8.67	0.42	6.24	9.83	0.00	135.54	135.54
65	BOK	1999/00	4.01	0.17	7.49	4.39	0.00	243.86	243.86
66	BOK	2000/01	3.29	0.17	7.60	3.89	0.00	-13.27	-13.27
67	BOK	2001/02	0.80	0.60	6.39	2.12	3.98	-70.47	-66.49
68	BOK	2002/03	8.95	0.87	6.82	10.26	2.53	-21.12	-18.59
69	BOK	2003/04	9.26	0.57	7.22	10.61	3.38	49.49	52.87
70	BOK	2004/05	7.00	0.43	7.60	8.00	3.49	45.27	48.76
71	BOK	2005/06	5.14	0.27	8.28	5.69	2.12	97.67	99.79
72	BOK	2006/07	3.16	0.12	9.02	3.49	1.45	61.76	63.22
73	BOK	2007/08	2.55	0.09	9.56	2.77	0.09	70.91	71.00
74	NICB	2000/01	2.42	0.26	7.60	2.74	2.51		2.51
75	NICB	2001/02	0.54	0.42	7.13	1.14	0.00	-37.34	-37.34
76	NICB	2002/03	2.88	0.61	6.80	3.68	0.00	-28.00	-28.00
77	NICB	2003/04	6.26	0.57	6.99	6.89	0.00	21.11	21.11
78	NICB	2004/05	6.22	0.37	7.51	6.56	0.00	67.89	67.89

S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
79	NICB	2005/06	3.24	0.26	8.00	7.93	0.02	35.79	35.81
80	LBL	2001/02	-1.53	0.98	6.00	-1.16	0.00		0.00
81	LBL	2002/03	0.26	0.83	6.25	1.93	0.00	20.00	20.00
82	LBL	2003/04	1.22	0.65	6.75	2.08	0.00	30.00	30.00
83	LBL	2004/05	1.52	0.37	6.75	2.01	0.00	82.69	82.69
84	LBL	2005/06	1.58	0.30	7.36	2.16	0.00	29.12	29.12
85	LBL	2006/07	1.56	0.17	8.49	1.56	0.00	87.50	87.50
86	LBL	2007/08	1.48	0.11	9.01	1.48	0.00	61.30	61.30
87	MBL	2001/02	31.09	0.58	6.00	26.98	0.00		0.00
88	MBL	2002/03	2.81	0.92	6.00	3.98	0.00	0.00	0.00
89	MBL	2003/04	6.79	0.80	6.53	7.83	0.00	25.00	25.00
90	MBL	2004/05	6.03	0.45	7.25	6.73	0.00	104.80	104.80
91	MBL	2005/06	5.86	0.41	7.47	6.41	0.05	25.00	25.05
92	MBL	2006/07	1.45	0.20	8.54	1.72	0.00	93.75	93.75
93	MBL	2007/08	0.81	0.11	9.25	1.00	0.01	107.26	107.27
94	KBL	2004/05	4.30	0.38	7.20	5.22	0.00		0.00
95	KBL	2005/06	3.74	0.31	7.93	4.62	0.00	64.68	64.68
96	KBL	2006/07	3.66	0.20	8.74	4.33	0.17	39.95	40.12
97	SBL	2003/04	-8.89	0.91	5.16	-7.26	0.00		0.00
98	SBL	2004/05	8.73	0.48	5.52	9.71	0.00	130.00	130.00
99	SBL	2005/06	3.63	0.34	5.62	4.33	0.00	56.52	56.52
100	SBL	2006/07	2.04	0.17	6.73	2.27	2.03	116.11	118.14
101	SBL	2007/08	1.59	0.12	8.64	1.71	1.45	40.10	41.55
102	NDB	2001/02	1.63	0.70	5.41	3.61	0.00		0.00
103	NDB	2002/03	0.68	0.98	5.31	3.74	0.00	-29.03	-29.03
104	NDB	2003/04	-185.05	-0.73	5.09	-182.28	0.00	-7.27	-7.27
105	NDB	2004/05	55.99	-0.35	4.95	53.89	0.00	-13.73	-13.73
106	NDB	2005/06	-99.05	-1.40	5.09	-102.26	0.00	15.91	15.91
107	NFL	1997/98	24.32	1.20	2.25	26.32	15.79		15.79
108	NFL	1998/99	24.90	1.07	2.54	27.13	17.39	21.05	38.44
109	NFL	1999/00	9.81	0.36	3.88	10.39	5.19	234.78	239.98
110	NFL	2000/01	10.65	0.58	3.31	11.18	7.24	-43.38	-36.13
111	NFL	2001/02	11.87	0.64	3.40	12.74	9.52	-3.67	5.85
112	NFL	2002/03	11.45	0.55	3.48	12.14	7.69	23.81	31.50
113	NFL	2003/04	15.99	0.64	4.01	17.42	12.27	-15.38	-3.11
114	NFL	2004/05	12.78	0.59	4.18	14.08	0.00	18.18	18.18
115	NFL	2005/06	11.35	0.56	4.55	12.68	0.00	7.69	7.69

S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
116	SFC	1997/98	24.00	8.40	2.20	37.33	0.00	0.00	0.00
117	SFC	1998/99	34.11	1.87	2.52	37.02	0.00	450.00	450.00
118	SFC	1999/00	13.91	1.01	3.49	15.07	0.00	109.09	109.09
119	SFC	2000/01	7.88	0.82	3.52	9.27	0.00	30.43	30.43
120	SFC	2001/02	-38.61	0.58	3.21	-36.23	0.00	-26.67	-26.67
121	SFC	2002/03	11.03	0.67	3.34	13.11	0.00	13.64	13.64
122	SFC	2003/04	5.11	0.75	3.33	5.96	0.00	-3.20	-3.20
123	SFC	2004/05	0.86	75.55	3.21	2.13	0.00	-6.61	-6.61
124	SFC	2005/06	8.23	0.90	3.16	10.25	0.00	-7.08	-7.08
125	PFC	1997/98	19.18	0.75		20.14	0.00		0.00
126	PFC	1998/99	23.51	0.97	3.19	24.92	0.00	10.00	10.00
127	PFC	1999/00	17.35	0.80	3.43	18.08	8.19	24.79	32.99
128	PFC	2000/01	10.76	0.47	4.70	11.18	7.27	82.12	89.38
129	PFC	2001/02	5.75	0.53	4.61	6.60	4.00	-9.09	-5.09
130	PFC	2002/03	24.17	0.72	4.54	25.08	13.64	-12.00	1.64
131	PFC	2003/04	12.06	0.63	4.48	12.71	8.00	13.64	21.64
132	PFC	2004/05	11.77	0.71	4.61	14.23	4.17	-4.00	0.17
133	PFC	2005/06	8.53	0.64	4.84	10.70	0.00	4.17	4.17
134	PFL	1998/99	15.14	0.48	3.61	15.49	8.11		8.11
135	PFL	1999/00	20.35	0.63	3.61	20.73	8.11	0.00	8.11
136	PFL	2000/01	17.97	0.46	4.19	18.20	4.55	78.38	82.92
137	PFL	2001/02	21.23	0.62	4.03	21.79	7.14	-15.15	-8.01
138	PFL	2002/03	25.11	0.87	4.01	25.70	9.26	-3.57	5.69
139	PFL	2003/04	27.18	1.05	4.04	27.69	5.26	5.56	10.82
140	PFL	2004/05	21.19	1.01	4.29	21.61	0.00	28.07	28.07
141	PFL	2005/06	0.86	0.41	5.10	0.99	0.00	12.33	12.33
142	SFL	2001/02	17.13	0.95	3.37	17.75	12.50		12.50
143	SFL	2002/03	18.29	0.92	3.41	19.42	11.11	12.50	23.61
144	SFL	2003/04	28.11	1.04	3.18	29.35	8.70	-14.81	-6.12
145	SFL	2004/05	14.44	1.00	3.45	16.27	0.00	4.45	4.45
146	SFL	2005/06	16.48	0.84	4.41	17.54	0.00	31.54	31.54
147	BFL	2002/03	12.61	1.06	4.05	14.90	14.50		14.50
148	BFL	2003/04	7.03	1.05	4.05	8.12	8.70	0.00	8.70
149	BFL	2004/05	10.46	1.07	4.09	12.39	12.63	8.70	21.33
150	BFL	2005/06	12.56	1.09	4.09	14.04	8.78	-4.00	4.78
151	NCM	2000/01	4.33	0.24	4.79	4.99	2.50		2.50
152	NCM	2001/02	1.44	0.68	3.56	2.67	0.00	-70.83	-70.83
153	NCM	2002/03	-7.94	0.87	4.32	-6.52	0.00	-28.57	-28.57
154	NCM	2003/04	32.78	1.20	4.16	34.31	0.00	-14.40	-14.40
155	NCM	2004/05	9.67	1.07	4.47	11.04	0.00	35.51	35.51
S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY

156	NCM	2005/06	28.31	0.75	4.83	34.85	7.21	43.45	50.66
157	GFCL	2000/01	3.80	0.00	4.40	4.56	5.07		5.07
158	GFCL	2001/02	0.14	0.00	4.40	0.96	0.00	0.00	0.00
159	GFCL	2002/03	4.07	0.53	4.07	5.16	2.13	-27.69	-25.56
160	GFCL	2003/04	8.69	0.70	4.11	11.40	5.85	-23.40	-17.55
161	GFCL	2004/05	9.04	0.57	4.13	11.14	5.69	2.78	8.47
162	GFCL	2005/06	9.08	0.73	4.13	10.34	6.38	-10.81	-4.43
163	AFC	2000/01	12.18	0.00	4.06	12.38	2.07		2.07
164	AFC	2001/02	63.64	2.35	4.41	67.32	10.91	-81.03	-70.13
165	AFC	2002/03	55.96	2.61	4.43	58.63	10.00	9.09	19.09
166	AFC	2003/04	14.66	1.06	4.50	15.15	0.58	275.00	275.58
167	AFC	2004/05	15.31	0.58	4.46	15.70	1.22	-4.22	-3.00
168	AFC	2005/06	14.82	0.44	5.99	15.12	0.12	3.25	3.37
169	NHFCL	2000/01	13.86	0.85	3.82	14.51	10.40		10.40
170	NHFCL	2001/02	9.65	0.72	4.15	10.39	8.00	40.00	48.00
171	NHFCL	2002/03	12.66	0.87	4.02	30.38	9.80	-12.57	-2.77
172	NHFCL	2003/04	18.93	0.89	4.09	19.55	0.00	7.84	7.84
173	NHFCL	2004/05	17.43	0.84	4.21	18.18	0.00	12.12	12.12
174	NHFCL	2005/06	15.31	0.81	4.74	15.83	5.26	2.70	7.97
175	NFC	2000/01	12.00	0.50	5.12	12.69	5.36		5.36
176	NFC	2001/02	10.82	0.57	6.14	11.99	3.88	-8.04	-4.15
177	NFC	2002/03	23.05	1.99	4.92	26.69	0.00	-69.90	-69.90
178	NFC	2003/04	11.72	0.70	5.02	13.16	0.00	132.26	132.26
179	NFC	2004/05	23.43	0.92	4.82	24.75	0.00	-18.06	-18.06
180	NFC	2005/06	6.60	0.70	5.52	7.28	0.20	-10.85	-10.65
181	NSM	2000/01	0.07	0.58	4.68	2.78	0.00		0.00
182	NSM	2001/02	2.63	0.70	4.56	5.80	0.00	-11.67	-11.67
183	NSM	2002/03	-1.86	0.82	4.32	3.18	0.00	-21.38	-21.38
184	NSM	2003/04	2.82	1.03	4.82	8.94	0.00	-17.60	-17.60
185	NSM	2004/05	9.12	0.89	4.97	14.43	8.33	16.50	24.84
186	NSM	2005/06	11.67	0.77	5.16	15.06	7.26	20.83	28.10
187	LFLC	2000/01	19.89	0.79	4.81	20.53	9.76		9.76
188	LFLC	2001/02	18.19	0.84	4.68	19.21	13.89	-12.20	1.69
189	LFLC	2002/03	-19.86	1.06	4.17	-18.83	0.00	-40.00	-40.00
190	LFLC	2003/04	34.10	1.49	4.09	35.76	0.00	-7.41	-7.41
191	NIL	1997/98	8.52	1.10	4.05	10.34	0.00	0.00	0.00
192	NIL	1998/99	7.64	0.94	4.25	10.60	7.14	21.74	28.88
193	NIL	1999/00	3.93	0.54	4.91	4.82	3.70	92.86	96.56
194	NIL	2000/01	12.86	0.91	4.51	15.08	5.52	-32.96	-27.44
195	NIL	2001/02	10.52	0.98	4.51	13.74	5.49	0.55	6.05
S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
196	NIL	2002/03	9.32	1.42	4.17	12.78	0.00	-28.57	-28.57

197	NIL	2003/04	7.32	1.69	4.03	10.16	0.00	-13.85	-13.85
198	HGI	2000/01	10.63	0.69	4.48	12.09	5.26		5.26
199	HGI	2001/02	11.33	0.89	4.21	14.56	4.44	-21.05	-16.61
200	HGI	2002/03	20.21	1.32	4.04	23.98	0.00	-15.56	-15.56
201	HGI	2003/04	22.78	1.34	3.96	28.10	0.00	-7.89	-7.89
202	HGI	2004/05	17.90	0.98	4.12	21.33	0.00	17.14	17.14
203	HGI	2005/06	21.11	1.06	4.04	28.02	0.00	-7.80	-7.80
204	UIC	2000/01	6.86	0.77	4.92	7.45	3.51		3.51
205	UIC	2001/02	8.25	0.96	4.74	9.00	3.68	-16.67	-12.98
206	UIC	2002/03	4.33	1.18	4.42	8.03	4.35	-27.37	-23.02
207	UIC	2003/04	11.80	1.60	4.42	16.28	0.00	-23.91	-23.91
208	UIC	2004/05	13.25	1.46	4.34	16.27	0.00	21.90	21.90
209	UIC	2005/06	12.26	1.61	4.32	15.53	0.00	-2.34	-2.34
210	PIC	2000/01	12.44	0.85	4.19	13.74	5.91		5.91
211	PIC	2001/02	16.90	1.26	3.93	21.17	5.88	-22.73	-16.84
212	PIC	2002/03	10.36	1.20	4.05	14.18	0.00	12.94	12.94
213	PIC	2003/04	11.97	1.28	4.14	15.00	0.00	9.38	9.38
214	PIC	2004/05	22.23	1.53	4.14	23.97	0.00	0.00	0.00
215	PIC	2005/06	21.77	1.88	4.09	24.77	0.00	-4.76	-4.76
216	SIC	2000/01	6.04	0.58	3.97	6.87	0.00		0.00
217	SIC	2001/02	10.98	0.86	4.46	13.15	0.00	-27.97	-27.97
218	SIC	2002/03	13.73	1.16	4.34	16.18	0.00	-11.76	-11.76
219	SIC	2003/04	21.49	1.64	4.30	23.68	0.00	-12.67	-12.67
220	SIC	2004/05	19.12	1.51	4.48	21.73	0.00	20.61	20.61
221	SIC	2005/06	14.35	1.24	4.77	16.95	0.00	32.91	32.91
222	TRH	2000/01	-6.36	0.91	6.71	-5.17	0.00		0.00
223	TRH	2001/02	-6.48	2.00	5.92	-3.36	0.00	-54.55	-54.55
224	TRH	2002/03	-0.32	1.64	5.79	-0.20	0.00	-12.00	-12.00
225	TRH	2003/04	-0.44	1.22	5.67	-0.19	0.00	-11.36	-11.36
226	TRH	2004/05	0.58	0.63	5.70	0.93	0.00	2.56	2.56
227	TRH	2005/06	0.00	0.61	5.77	0.00	0.00	7.50	7.50
228	OHL	2002/03	-49.12	0.39	5.50	-44.56	0.00		0.00
229	OHL	2003/04	-30.36	0.15	5.35	-10.54	0.00	-14.29	-14.29
230	OHL	2004/05	-28.02	-0.17	5.52	-12.25	0.00	19.05	19.05
231	OHL	2005/06	-12.68	-0.19	5.39	6.86	0.00	-12.00	-12.00
232	SHL	99/2000	9.58	0.69	6.40	19.79	5.43		5.43
233	SHL	2000/01	4.55	0.43	6.92	10.73	2.58	68.48	71.06
234	SHL	2001/02	2.55	0.54	6.74	2.55	0.77	-16.13	-15.36
235	BNT	1997/98	49.08	1.20	5.07	53.30	0.00		0.00
S.N.	Es	Year	E/P	B/M	LS	C/P	DY	CY	TY
236	BNT	1998/99	16.43	0.64	5.97	18.66	0.00	148.09	148.09
237	BNT	1999/00	6.49	0.33	6.86	7.87	0.00	141.54	141.54

238	BNT	2000/01	7.27	0.46	6.65	9.49	2.34	-18.47	-16.13
239	BNT	2001/02	6.06	0.59	6.47	9.14	1.87	-16.56	-14.69
240	BNT	2002/03	4.56	0.68	6.36	8.38	2.08	-10.11	-8.03
241	BNT	2003/04	3.54	0.70	6.31	7.70	1.10	-5.00	-3.90
242	BNT	2004/05	2.92	0.72	6.21	6.08	0.00	0.88	0.88
243	BNT	2005/06	-4.65	0.47	6.18	5.73	0.00	0.43	0.43
244	BNL	1997/98	8.81	0.87	6.44	11.46	0.00		0.00
245	BNL	1998/99	7.97	0.82	6.59	12.39	0.00	17.19	17.19
246	BNL	1999/00	7.97	0.93	6.55	13.26	0.00	-4.00	-4.00
247	BNL	2000/01	3.04	0.57	7.07	3.99	1.65	68.06	69.71
248	BNL	2001/02	4.16	0.60	7.06	8.57	1.67	-0.83	0.84
249	BNL	2002/03	1.42	0.52	7.22	5.55	0.71	16.67	17.38
250	BNL	2003/04	1.49	0.53	7.22	3.74	0.00	0.00	0.00
251	BNL	2004/05	3.50	0.71	6.98	5.44	0.00	-20.86	-20.86
252	BNL	2005/06	3.88	0.72	6.88	13.39	0.00	-9.75	-9.75
253	UNL	1997/98	22.77	0.38	6.09	37.93	4.17		4.17
254	UNL	1998/99	8.61	0.18	7.23	15.00	2.66	212.71	215.37
255	UNL	1999/00	5.87	0.16	7.63	10.85	2.24	48.57	50.81
256	UNL	2000/01	3.32	0.17	7.61	9.23	2.50	-1.35	1.15
257	UNL	2001/02	3.43	0.28	7.13	15.75	2.96	-38.64	-35.67
258	UNL	2002/03	8.95	0.34	6.95	25.09	7.96	-16.30	-8.33
259	UNL	2003/04	10.92	0.31	7.43	24.99	7.14	23.89	31.04
260	UNL	2004/05	12.60	0.14	7.59	13.74	24.52	16.50	41.02
261	UNL	2005/06	10.35	0.10	7.74	11.20	10.00	53.28	63.28