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Firm Specific Fundamental Variables and Common Stock Returns

Shiva Raj Poudel, PhD
Assistant Professor, Far Western University, Nepal
Email: shivapoudyal@gmail.com

Abstract

The main objective of the study is to examine the impact of firm specific fundamental variables on cross-section of expected stock returns from the Nepali capital market. The data were collected form the sample of 48 firms actively traded in the Nepal stock exchange (NEPSE) for 12 years from mid-July 2011 to mid-July 2022 with 576 observations. The explained variable is common stock returns and the explanatory variables are firm specific fundamental variables such as market capitalization as proxied by firm size, book to market equity, earning yield and cashflow yield. The study examined that firm size, book to market equity, and earning yield (for only CGY and TY) have the significant negative impact on common stock returns in Nepali capital market. In contrast earning yield has the significant positive impact on dividend yield only. The cashflow yield has no significant impact on common stock returns in Nepali capital market.

Keywords: Stock return, firm size, book to market equity, earning yield, cashflow yield

Introduction

Capital market has the fluctuating nature and hard to predict the prices and returns from the risky assets. Since the seminal paper of Markowitz (1952), many empirical studies have been conducted to determine the expected returns from the market. Most prominently, the capital assets pricing model (CAPM) of Sharpe (1964), Lintner (1965), and Black (1972). The CAPM assets that only the systematic risk as proxied by stock beta can predict and explain the expected stock return. However, Ross (1976), Basu (1977), Banz (1981), and Fama and French (1993) have questioned on the single factor variation of CAPM and provided the new insight in to the assets pricing literature called arbitrage pricing theory (APT). The APT asserts that not only the systematic risk, but also the firm specific factors and macro-economic factors can capture significant variation on common stock returns.

The literature again has a long debate on the relationship and predictive power of fundamental variables on common stock returns. The most prominent and widely examined fundamental variables suggested to have the significant impact on stock returns are the firm size, book to market equity, earning yield and cashflow yield. Among them, the most examined is size effect of Banz (1981) which confirmed that smaller firms have had a higher risk adjusted returns on an average than larger firms. Similarly, Fama and French (1992) revealed that the negative effect of firm size. However, Davis (1994) found that size have lack of explanatory power in predicting common stock returns.

In addition, Chan et al. (1991) confirmed and supported by Davis (1994), Stattman (1980) and Rosenberg et al. (1985) that the book to market ratio and cash flow yield have the most significant positive impact on expected stock returns. In contrast, Handa, Kothari and Wasley (1989) and Kim (1995) showed that the errors in estimating cross-section stock returns associated with fundamental variables. Ball (1978) argued that earning yield is a proxy for factors in expected returns and it is likely to be higher for stocks with higher risks and expected returns. Similarly, Basu (1983) found that earnings yield has the significant explanatory power to explain cross-section of US common stock returns.

In the context of small and emerging capital market Pradhan and Balampaki (2006) found that stock return is negatively influenced by book to market equity and cashflow yield. Similarly, Poudel (2019) confirmed that significant negative impact of firm size, book to market equity, earning yield, and cash flow yield on common stock returns. Dangol and Acharya (2020) examined a negative impact of firm size and book to market equity on stock returns (total yield) whereas, earning yield has significant positive impact only on capital gain yield and total yield and cashflow yield do have any significant impact on stock returns.

Even though, these are the conflicting empirical findings observed from the different economy, time frame and the methodology used, it creates future research issue

on how these fundamental variables carry cross-sectional effect in predicting expected stock returns in the Nepali context. In order to address this issue, this study offers comprehensive and cross-sectional evidences of fundamental variables on common stock returns from Nepali capital market to compare with the existing evidences from developed and large capital market. In doing so, this study is conducted based on the dataset of 48 sample firms listed in Nepal stock exchange (NEPSE) covering 12 years period from mid-July 2011 to mid-July 2022 with 576 observations. Firstly, the impact of firm specific fundamental variables on stock return is examined by using the portfolio analysis and the robustness of the results was further cross-examined by using the ordinary least square multiple-regression model for all sample, banking and financial institutions (BFIs), insurance companies, and other companies sample.

The results from all sample firms confirmed that firm size, book to market equity, and earning yield (except dividend yield) have the significant negative impact on common stock returns in Nepali capital market. In contrast, earning yield has the significant positive impact on dividend yield. Cashflow yield has insignificant impact on common stock returns. These findings may be useful to the investors, future researchers, and the policy makers for taking important decisions relating to Nepali capital market.

The remaining section of the study consists of research methodology, results and discussions, and finally the conclusion.

Research Methodology

The descriptive and casual comparative research design has been adopted for this study to deal with the fundamental issues associated with the firm specific fundamental variables and common stock returns in the context of Nepali capital market. The main reason of using descriptive research design is to identify and describe the different state of affairs exist in firm specific fundamental variables. Moreover, the purpose of using casual comparative research design is to identify the direction and the magnitude of impact of firm specific fundamental variables on common stock returns. The study has been conducted by using the dataset of 48 sample firms listed in Nepal stock exchange (NEPSE). The study period covers 12 years starting from mid-July 2011 to mid-july-2022 with 576 observations. In order to examine the cross-sectional effect of fundamental variables on common stock returns, stratified and purposive sampling method has been adapted. For this, all the sample firms were re-classified into three types of industries groups based on the nature of their function such as banking and financial institutions (BFIs), insurance companies, and other companies as shown in Table 1.

Table 1

Population and Sample Firms

SN	Industry/Sample Groups	Sample Firms	Study Periods	No. of Observations
1	Banking and Financial Institutions (BFIs)	28	2010/11-2021/22	336
2	Insurance Companies	14	2010/11-2021/22	168
3	Other Companies	6	2010/11-2021/22	72
	Total number of Companies	48	2010/11-2021/22	576

The process of data analysis includes portfolio analysis, descriptive statistics, correlation analysis, and regression analysis. In addition, statistical tests of significance have also been conducted for validation of model such as test of multicollinearity, t-test, F-test, Durbin-Watson (DW) test, and goodness of fit of the model (Adjusted R^2). The overall data analysis is conducted by using the statistical package software (SPSS-26). The model used for the analysis is as follows.

$$Y_{it} = \beta_1 + \beta' X_{it} + \varepsilon_{it} \quad \ldots (1)$$

Where,

Y_{it} = Dependent variable (capital gain yield, dividend yield, and total yield) for firm 'i' at time 't'

β_1 = Constant term, assumed to be constant over time the time for all firms

β' = Coefficient of explanatory variables i.e., fundamental variables

X_{it} = Vector of explanatory variables

ε_{it} = Stochastic error terms

This model can be expressed in detail as:

$$CGY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it} \quad \ldots (1.a)$$

$$DY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it} \quad \ldots (1.b)$$

$$TY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it} \quad \ldots (1.c)$$

Where,

CGY_{it} = Capital Gain Yield from common stock of firm 'i' for time 't'

DY_{it} = Dividend Yield from common stock of firm 'i' for time 't'

TY_{it} = Total Yield from common stock of firm 'i' for time 't'

$Size_{it}$ = Total market capitalization of firm 'i' for time 't' measured in term of natural logarithm

BM_{it} = Book to Market equity of firm 'i' for time 't'

EY_{it} = Earning Yield of firm 'i' for time 't'

CFY_{it} = Cash Flow Yield of firm 'i' for time 't'

The dependent variable used in the study is common stock returns. The total rate of returns from common stocks are defined as the stock returns which consists of returns

from the market and the dividend yield. Firstly, the study aimed to identify the impact on capital gain yield and the result is compared with dividend yield and total yield. Therefore, all capital gain yield, dividend yield, and total yield are used as the dependent variable for the study.

Dependent Variable

The dependent variable used in the study is common stock returns. The total rate of returns from common stocks are defined as the stock returns which consists of returns from the market and the dividend yield. Firstly, the study aimed to identify the impact on capital gain yield and the result is compared with dividend yield and total yield. Therefore, all capital gain yield, dividend yield, and total yield are used as the dependent variable for the study.

Capital Gain Yield (CGY)

One of the dependent variables used in the study is capital gain yield. The capital gain yield is the annual rate of earning of an investor from the market. More clearly, the capital gain yield is defined as the rate of change in market price of common stock of a firm during the period 't' over the period 't-1'. Symbolically:

$$CGY_{it} = [P_{it}-P_{i(t-1)}] / P_{i(t-1)} \quad \ldots (2)$$

Where,

CGY_{it} = Annual market returns from common stocks of firm 'i' for the year 't'

P_{it} = Market price per share of firm 'i' for the year 't'

$P_{i(t-1)}$ = Market price per share of firm 'i' for the year 't-1'

Dividend Yield (DY)

The second dependent variable of the study is dividend yield. Dividend yield is the annual rate of dividend provided by the company to the shareholders.

Symbolically:

$$DY_{it} = D_{it} / P_{i(t-1)} \quad \ldots (3)$$

Where,

DY_{it} = Annual dividend yield from common stocks of firm 'i' for the year 't'

D_{it} = Dividend per share of firm 'i' for the year 't'

$P_{i(t-1)}$ = Market price per share of firm 'I' for the year 't-1'

Total Yield (TY)

The third dependent variable used in the study is total yield. Total yield is the combined yield from the market and the returns from the stock in terms of dividend.

Symbolically:

$$TY_{it} = [D_{it} + P_{it} - P_{i(t-1)}] / P_{i(t-1)} \quad \ldots (4)$$

Where,

TY_{it} = Annual total returns from common stocks of firm 'i' for the year 't'

D_{it} = Dividend per share of firm 'i' for the year 't'

P_{it} = Market price per share of firm 'i' for the year 't'

$P_{i(t-1)}$ = Market price per share of firm 'i' for the year 't-1'

Independent Variables

The independent variables used for the study are firm specific fundamental variables. The detail description of the variables are as follows:

Market Capitalization (Size)

Size is the proxy of market equity of the firm. Size is defined as the total market capitalizations of a firm for a given time period. It has been calculated as total shares outstanding of the firm 'i' multiplied by closing price per share at the end of the period 't'. Symbolically:

$$Size_{it} = N_{it} \times P_{it} \quad \ldots (5)$$

Where,

$Size_{it}$ = Firm size or total market capitalization of the firm 'i' at the end of the year 't'

N_{it} = Total shares outstanding of firm 'i' at the end of the 't'

P_{it} = Market price per share of firm 'i' at the end of the year 't'

Banz (1981) reported that smaller firms have had higher risk adjusted returns on an average than larger firms and supported by large body of empirical evidences such as Wong et al. (2006), Kumar and Sehgal (2004), and Shaker and Elgiziry (2014). Therefore, the proposed research hypothesis for the study is:

Research Hypothesis (H_1): Firm size has the significant negative impact on stock returns.

Book to Market Equity (BM)

BM is the ratio of book to market equity which has been calculated as book value of common stock divided by its market value at the end of the year of firm 'i' at time 't'. Symbolically:

$$BM_{it} = BE_{it}/ME_{it} \quad \ldots (6)$$

Where,

BM_{it} = Book to market equity of the firm 'i' at the end of the year 't'

BE_{it} = Book value of the common stock of the firm 'i' at the end of the year 't'

ME_{it} = Market value of the common stock of the firm 'i' at the end of the year 't'

Stattman (1980), Rosenberg et al. (1985) found average stock returns are positively related with Book to Market Equity. Similarly, Chan et al. (1991) found book to market ratio and cashflow yield have the most significant positive impact on expected returns in Japanese firms. Moreover, Fama and French (1992) found that the cross-sectional

variation in average stock returns associated with book to market equity along with size and earning yields. Thus, research hypothesis for book to market equity is:

Research Hypothesis (H_2): Book to market equity has the significant positive impact on stock returns.

Earning Yield (EY)

Earning yield is the ratio between earning per share to market price per share at the end of the year of firm 'i' for time 't'. Symbolically, the earning yield is defined as follows:

$$EY_{it} = EPS_{it}/P_{it} \quad \ldots (7)$$

Where,

EY_{it} = Earning yield of the firm 'i' at time 't'

EPS_{it} = Earnings per share of the firm 'i' at time 't'

P_{it} = Market price per share of the firm 'i' at time 't'

Ball (1978) argued that earning yield is a proxy for factors in expected returns and it is likely to be higher for stocks with higher risks and expected returns. Similarly, Basu (1983) found that earnings yield has the significant explanatory power to explain cross section of US common stock returns. Therefore, proposed hypothesis is:

Research Hypothesis (H_3): Earning yield has the significant positive impact on stock returns.

Cashflow Yield (CFY)

Cashflow yield is the ratio between total cashflow per share to total market price per share at the end of the year of firm 'i' at time 't'. Symbolically:

$$CFY_{it} = CF_{it}/ME_{it} \quad \ldots (8)$$

Where,

CFY_{it} = Cashflow yield of the firm 'i' at time 't'

CF_{it} = Total cashflow (cashflow form operating activities) of the firm 'i' at time 't'

ME_{it} = Market equity of the firm 'i' at time 't'

Showing the high importance of cashflow yield, Chan et al. (1991) found that cashflow yield has positive and highly significant impact on expected returns in Japan. Similarly, Cakici et al. (2011) found strong positive predictive power of book to market equity and cashflow yield on stock returns. Thus, research hypothesis for the study is proposed as follows:

Research Hypothesis (H_4): Cashflow yield has the significant positive impact on stock returns.

Summary outline of the expected relationship between explained and explanatory variables have been depicted in Table 2.

Table 2

Expected Relationship between Explained and Explanatory Variables

Variables	Expected Signs (Hypothesis)	Evidences
Firm Size	-	Banz (1981), Wong et al. (2006), Kumar and Sehgal (2004), and Shaker and Elgiziry (2014)
Book to Market Equity	+	Stattman (1980), Rosenberg et al. (1985), Fama and French (1992), and Chan et al. (1991)
Earning Yield	+	Ball (1978) and Basu (1983)
Cashflow Yield	+	Chan et al. (1991) and Cakici et al. (2011)

Table 2 shows the expected relationship and the direction of impact of fundamental variables on common stock returns based on the theoretical evidences. It is expected that firm size has the significant negative impact on stock returns. In contrast, Book to market equity, earning yield, and cashflow yield have the significant positive impact on cross-section of expected stock returns in Nepali capital market

Results and Discussion

Results

The impact of firm specific variables on common stock returns have been analyzed and the results are presented in following four sections. Firstly, the properties of one - way portfolios formed based on fundamental variables are presented and analyzed. Similarly, in the second section, descriptive statistics of the variables are presented and analyzed. In the third section, the correlation among the dependent and independent variables are presented and analyzed. And finally, the results from the regression analysis to examine the impact of fundamental variables on common stock returns in Nepali capital market are presented and analyzed.

Portfolio Analysis

In this section different portfolios of stock returns are formed and analyzed based on the firm specific fundamental variables The motive of forming portfolios is to gain insight into the impact of different firm specific fundamental variables on cross section of expected stock returns across the different portfolios.

Using the one-way portfolio analysis, the relationship of fundamental variables and common stock returns are examined across the different portfolios. In doing so, all the fundamental variables are classified into five quintiles (1 = low to 5 = high) and the descriptive statistics such as mean, standard deviation (in parenthesis), and number of observations (n) of corresponding returns are presented as follows.

Properties of Portfolios for Common Stock Returns Sorted by Firm Size. In this section of analysis, the impact of firm size across the different portfolios on common stock returns are examined. Total market capitalization is used as the proxy of firm size. In order to examine the impact of firm size on common stock returns, a set of portfolios were sorted for common stock returns along with other firm specific variables based on the five equal quintiles (1 = low to 5 = high) of firm size ranging from lowest is less than equal to 0.486 billion to highest is greater than 21.097 billion.

Table 3 presents the summary statistics (mean and standard deviation) for the properties of portfolios sorted into five quintiles of firm size for all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. 'n' denotes the number of observations in each portfolio. The reported values are the mean values of each portfolio calculated in fraction of percentage. Figures in the parentheses are the standard deviations.

Table 3

Properties of Portfolios Sorted by Firm Size

Variables	All	Portfolios Sorted by Firm Size				
		1 (Low)	2	3	4	5 (High)
		≤ 0.486 (Billion)	> 0.486 ≤ 1.724 (Billion)	> 1.724 ≤ 6.518 (Billion)	> 6.518 ≤ 21.097 (Billion)	> 21.097 (Billion)
Size (Billion)	18.649 (27.510)	0.256 (0.115)	1.006 (0.338)	3.968 (1.379)	12.002 (4.020)	47.167 (24.701)
CGY	0.225 (0.991)	0.440 (0.313)	0.414 (1.155)	0.394 (1.431)	0.183 (0.907)	0.021 (0.510)
DY	0.043 (0.049)	0.065 (0.076)	0.063 (0.060)	0.039 (0.047)	0.037 (0.030)	0.035 (0.024)
TY	0.268 (1.003)	0.481 (0.341)	0.455 (1.171)	0.433 (1.445)	0.220 (0.922)	0.056 (0.518)
BM (Times)	0.608 (0.882)	1.188 (1.446)	0.872 (1.172)	0.540 (0.695)	0.332 (0.256)	0.393 (0.386)
EY	0.070 (0.088)	0.165 (0.165)	0.079 (0.088)	0.066 (0.059)	0.051 (0.025)	0.046 (0.037)

CFY	0.120	0.439	-0.009	0.085	0.093	0.082
	(0.290)	(1.204)	(1.716)	(0.193)	(0.119)	(0.116)
n	576	115	115	116	115	115

Table 3 reveals that the average common stock returns are decreased as increase in the firm size from lowest (CGY = 44%, DY = 6.5%, & TY = 48.1%) to highest (CGY = 2.1%, 3.5%, & TY = 5.6%) portfolio of firm size. The decreasing trend of stock return reveals that form size has the negative impact on common stock returns. It means, lower firms can earn higher rate of return in Nepali capital market. More clearly, the higher the firm size, the lower would be the common stock returns is observed in Nepali capital market.

Properties of Portfolios for Common Stock Returns Sorted by Book to Market Equity. The impact on common stock return is examined across the different portfolios sorted by book to market equity using the database of all 48 sample firms. In order to examine the impact of book to market equity on common stock returns, a set of portfolios were sorted for common stock returns along with other firm specific variables based on the five equal quintiles of book to market equity ranging from lowest is less than equal to 0.216 to highest is greater than 0.869. The results are shown in Table 4.

Table 4 presents the summary statistics (mean and standard deviation) for the properties of portfolios sorted into five quintiles of book to market equity for all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. 'n' denotes the number of observations in each portfolio. The reported values are the mean values of each portfolio calculated in fraction of percentage. Figures in the parentheses are the standard deviations.

Table 4

Properties of Portfolios Sorted by Book to Market Equity

		Portfolios Sorted by Book to Market Equity				
Variables	All	1 (Low)	2	3	4	5 (High)
		≤ 0.216	> 0.216 ≤ 0.348	> 0.348 ≤ 0.555	> 0.555 ≤ 0.869	> 0.869
BM (Times)	0.608 (0.882)	0.137 (0.048)	0.286 (0.039)	0.440 (0.062)	0.695 (0.087)	1.766 (1.723)

CGY	0.225	0.637	0.322	0.086	-0.024	-0.072
	(0.991)	(1.499)	(1.190)	(0.652)	(0.434)	(0.335)
DY	0.043	0.037	0.035	0.045	0.055	0.060
	(0.049)	(0.037)	(0.035)	(0.050)	(0.051)	(0.075)
TY	0.268	0.674	0.358	0.132	0.031	-0.011
	(1.003)	(1.514)	(1.205)	(0.674)	(0.456)	(0.371)
Size	18.649	24.337	14.721	9.285	10.249	5.808
(Billion)	(27.510)	(25.446)	(16.262)	(15.534)	(22.195)	(18.624)
EY	0.070	0.038	0.053	0.073	0.091	0.155
	(0.088)	(0.031)	(0.025)	(0.041)	(0.077)	(0.181)
CFY	0.120	0.050	0.074	-0.049	0.231	0.384
	(0.290)	(0.131)	(0.083)	(1.698)	(0.459)	(1.161)
N	576	115	115	116	115	115

Table 4 reveals that the average stock returns are decreased as increase in the book to market equity. The average stock returns for lowest book to market ratio are 63.7% (CGY) & 67.4% (TY) which are decreased to -7.2% (CGY) & -1.1% (TY) for highest book to market equity portfolios. The decrease in returns as increase in book to market equity further indicates that book to market equity has the negative impact on common stock returns. More clearly, the higher the book to market equity, the lower would be the common stock returns in Nepali capital market.

In contrast to the CGY and TY, the results show that dividend yield has not clear direction as increase in book to market equity. The unclear direction of average dividend yield towards highest book to market equity further suggests that there is a unpredictive relationship between book to market equity and the dividend yield in Nepali capital market.

Properties of Portfolios for Common Stock Returns Sorted by Earning Yield.

In this section of analysis, the impact on common stock returns is examined across the different portfolios from the database of all 48 sample firms. In order to examine the impact of earning yield on common stock returns, a set of portfolios were sorted for common stock returns along with other firm specific variables based on the five equal quintiles of book to market equity ranging from lowest is less than equal to 0.031 (3.1%) to highest is greater than 0.119 (11.9%). The results are shown in Table 5.

Table 5 presents the summary statistics (mean and standard deviation) for the properties of portfolios sorted into five quintiles of earning yield for all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The

independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. 'n' denotes the number of observations in each portfolio. The reported values are the mean values of each portfolio calculated in fraction of percentage. Figures in the parentheses are the standard deviations.

Table 5

Properties of Portfolios Sorted by Earning Yield

Variables	All	Portfolios Sorted by Earning Yield				
		1 (Low)	2	3	4	5 (High)
		≤ 0.031	> 0.031 ≤ 0.050	> 0.050 ≤ 0.075	> 0.075 ≤ 0.119	> 0.119
EY	0.070	-0.002	0.040	0.061	0.093	0.217
	(0.088)	(0.082)	(0.006)	(0.007)	(0.013)	(0.124)
CGY	0.225	0.487	0.284	0.125	0.072	0.054
	(0.991)	(1.474)	(1.176)	(0.740)	(0.575)	(0.383)
DY	0.043	0.020	0.031	0.042	0.056	0.086
	(0.049)	(0.021)	(0.031)	(0.036)	(0.043)	(0.081)
TY	0.268	0.507	0.315	0.166	0.146	0.140
	(1.003)	(1.483)	(1.193)	(0.761)	(0.600)	(0.422)
Size	18.649	22.207	16.086	12.209	6.560	7.337
(Billion)	(27.510)	(26.170)	(17.048)	(16.830)	(14.920)	(23.405)
BM	0.608	0.596	0.364	0.493	0.665	1.207
	(0.882)	(0.942)	(0.789)	(0.530)	(0.479)	(1.497)
CFY	0.120	0.055	0.073	0.096	0.170	0.296
	(0.290)	(0.189)	(0.165)	(0.185)	(0.227)	(2.096)
n	576	115	115	116	115	115

Table 5 indicates that the earning yield energies the average stock returns negatively. The average stock returns are decreasing continuously with increase in the earning yield. The results show that the average returns 48.7% (CGY) & 50.7 % (TY) are highest for the portfolio with lowest earning yield and the average returns declined to 5.4% (CGY) & 14% (TY) for the portfolio with highest earning yield. These results clearly reveal that firms with low earning yield perform well as compare to high earning yield in Nepali capital market.

Contrarily, average dividend yields are increasing continuously with increase in the earning yield. The lowest average dividend yield is 2.1% in lowest earning yield portfolio and the highest average dividend yield is 8.6% for highest earning yield portfolio. The increasing relationship between dividend yield and earning yield further reveal that the

higher the earning yield, the higher would be the dividend yield.

Properties of Portfolios for Common Stock Returns Sorted by Cashflow Yield.

In order to examine the impact on common stock returns across the portfolios of cashflow yield, a set of portfolios were sorted for common stock returns along with other firm specific variables based on the five equal quintiles of cashflow yield ranging from lowest is less than equal to 0.013 (1.3%) to highest is greater than 0.242 (24.2%). The results are shown in Table 6.

Table 6 presents the summary statistics (mean and standard deviation) for the properties of portfolios sorted into five quintiles of cashflow yield for all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. 'n' denotes the number of observations in each portfolio. The reported values are the mean values of each portfolio calculated in fraction of percentage. Figures in the parentheses are the standard deviations.

Table 6

Properties of Portfolios Sorted by Cashflow Yield

Variables	All	Portfolios Sorted by Cashflow Yield				
		1 (Low)	2	3	4	5 (High)
		≤ 0.013	> 0.013 ≤ 0.063	> 0.063 ≤ 0.120	> 0.120 ≤ 0.242	> 0.242
CFY	0.225	-0.269	0.039	0.090	0.170	0.659
	(0.991)	(1.678)	(0.014)	(0.017)	(0.035)	(1.145)
CGY	0.043	0.460	0.284	0.076	0.051	0.079
	(0.049)	(1.418)	(1.244)	(0.662)	(0.576)	(0.530)
DY	0.268	0.042	0.029	0.038	0.056	0.068
	(1.003)	(0.046)	(0.032)	(0.037)	(0.046)	(0.078)
TY	0.225	0.502	0.313	0.114	0.107	0.147
	(0.991)	(1.424)	(1.264)	(0.675)	(0.602)	(0.556)
Size	18.649	25.487	17.207	16.963	14.525	3.217
(Billion)	(27.510)	(20.459)	(21.170)	(23.021)	(24.849)	(7.220)
BM	0.608	0.480	0.397	0.421	0.638	1.390
(Times)	(0.882)	(0.430)	(0.564)	(0.233)	(0.384)	(1.812)

EY	0.070	0.048	0.039	0.055	0.100	0.166
	(0.088)	(0.073)	(0.025)	(0.073)	(0.064)	(0.153)
n	576	115	115	116	1115	115

Table 6 shows the portfolio results sorted by cashflow yield to all fundamental variables. The average stock returns for lowest portfolio of cashflow yield are 46%, 4.2%, and 50.2% for CGY, DY, and TY respectively. Likewise, the average stock returns for highest portfolio of cashflow yield are 7.9%, 6.8%, and 14.7% for CGY, DY, and TY respectively. The analysis further reveals that the average stock returns are fluctuated as increase in the portfolios sorted by cashflow yield. The average returns are decreased up to fourth quintile of cashflow yield and increased for highest level of portfolio of cashflow yield.

Descriptive Statistics of the Variables

In this section of data analysis, the descriptive statistics of the firm specific fundamental variables have been presented and analyzed. The descriptive statistics used in this study consists of mean, median, standard deviation, minimum and maximum values and number of observations associated with variables under consideration.

Table 7 presents the descriptive statistics (number of observations, minimum, maximum, mean, and standard deviations) of fundamental variables from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. Size is the market capitalization. BM is book to market ratio. EY is the earning yield, and CFY is cash flow yield.

Table 7

Descriptive Statistics of the Variables

Descriptive Statistics (n = 576)					
Variables	**Measures**	**Minimum**	**Maximum**	**Mean**	**SD**
Size	Rs. In Billion	0.059	197.100	18.649	27.510
B/M	Times	0.018	14.276	0.608	0.882
EY	Fraction of %	-0.625	0.772	0.070	0.088
CFY	Fraction of %	-1.577	2.994	0.120	0.290

Table 7 shows the descriptive statistics such as number of observations, minimum, maximum, mean, and standard deviation of fundamental variables for all 48 sample firms with 576 observations for the period of mid-July 2011 to mid-July 2022. The results reveal that the market capitalization as proxied by size of all samples firms ranges from minimum of 0. 059 billion to maximum of 197.1 billion with mean 18.649 billion and standard deviation 27.51 billion. The wider shape of market capital depicts that there is a variety of firms used in a sample in terms of size. In addition, the book to market equity

ratio of the sample firms ranges from minimum 0.018 to maximum of 14.276 with mean and standard deviation of 0.608 and 0.882 respectively. Similarly, the earning yield of the sample firms ranges from minimum of -62.5% to maximum 77.2% with mean and standard deviation of 7.0% and 8.8% respectively. The average cashflow yield for the sample firms is 11.9% ranging from minimum -157.7% to maximum 299.4% with 29% standard deviation.

Correlation Analysis

In this section of the study, the correlation coefficients between the variables under study have been presented. Therefore, this section is devoted to explaining the direction of relationship among explained and explanatory variables such as common stock returns, market risk as proxied by stock beta and different pairs of the firm specific fundamental variables.

Table 8 presents the bi-variate Pearson correlation coefficients between the different fundamental variables and all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow.

Table 8

Correlation between Fundamental Variables and Common Stock Returns

	Correlation Coefficients						
Variables	**CGY**	**DY**	**TY**	**Size**	**BM**	**EY**	**CFY**
CGY	1						
DY	0.213**	1					
TY	0.999**	0.259**	1				
Size	-0.053**	-0.259**	-0.118**	1			
BM	-0.130**	-0.115**	-0.123**	-0.343**	1		
EY	-0.099*	0.365**	-0.081	-0.409**	0.361**	1	
CFY	-0.041	0.211	-0.031	-0.286**	0.359**	0.394**	1

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

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

Table 8 presents the value of bivariate Pearson correlation coefficients among the three measures of common stock returns and the firm specific fundamental variables. The results reveal that the correlation coefficient of market capitalization as proxied by firm size with common stock returns are negative (CGY = -0.053**, DY = -0.258**, & TY =

-0.118**) and statistically significant at 1% level of significance. The significant negative correlation coefficients further suggest that there is a negative relationship between firm size and common stock returns. More clearly, the higher the firm size, the lower would be the common stock returns can be achieved in Nepali capital market.

Similarly, the correlation coefficients of book to market equity and common stock returns are negative and significant (CGY = -0.130**, DY = 0.115, & TY= -0.123**). The significant negative correlation coefficients further confirm that there is a negative relationship between book to market equity and common stock returns in Nepali capital market.

Furthermore, the correlation coefficients between earning yield and two measures of stock returns (CGY = -0.099* & TY = 0-.081) are negative. The negative and significant correlation coefficients (CGY) further confirm that there is a significant negative relationship between the earning yield and stock returns. in contrast to the CGY and TY, the correlation coefficient between EY and DY is positive and significant (0.365*) confirming that EY has the significant positive relationship with dividend yield. More clearly, the higher the earning yield, the higher would be the dividend yield in the Nepali capital market. In the same way, the correlation coefficients of CFY on CGY (-0.041) and TY (-0.031) are negative and insignificant where as positive with DY (0.211).

Regression Analysis

Ordinary Least Square (OLS) model and Fixed Effect Model of panel data analysis have been used to identify and analyze the relationship and the magnitude between explained and the explanatory variables. The explained variables are the three measures of common stock returns [capital gain yield (CGY), dividend yield (DY), and total yield (TY)]. The explanatory variables are firm specific fundamental variables such as firm size, book to market equity, earning yield, and cashflow yield. The overall analysis of this section has been classified in to four subsections.

In the first subsection, the regression results of firm specific fundamental variables from the all samples are presented and analyzed. The second subsection summarizes the regression results from the samples of banking and financial institutions (BFIs). Similarly, the third subsection shows the regression results of the samples from insurance companies, and finally, regression results from the samples of other companies other than BFIs and insurance companies are summarized in the fourth subsection.

The regression results obtained from the data analysis for all three measures of the common stock returns are presented and analyzed in the following subsections for all and stratified sample groups in Table – 9 to 12. The overall significance of the model is tested by the F-statistics and the significance of individual variable is examined by the

t-statistics. The overall goodness of the fit is tested by adjusted R2. The autocorrelation between the variables is also examined by using the Durbin-Watson (DW) test. The VIF test is used to test whether the multicollinearity problem among the variables exists or not.

Table 9 presents the regression result of market risk on all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. The reported values are intercepts and slope coefficients of respective explanatory variables with standard errors in parentheses. Also, reported are t-statistics, P-values, F-statistics, coefficients of determination (R^2 & Adjusted R^2), standard error of estimates (SEE), Variance Inflation Factor (VIF), and the values of Durbin Watson (DW) test.

$CGY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

$DY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

$TY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

Table 9

Regression Results of Fundamental Variables on Common Stock Returns (All Samples)

All Samples (n = 576)											
Variables	Capital Gain Yield (CYG)				Dividend Yield (DY)				Total Yield (TY)			
	Coefficients	T	P	VIF	Coefficients	t	P	VIF	Coefficients	t	P	VIF
Constant	1.969 (1.410)	1.397	0.164		-0.364 (0.486)	-0.749	0.454		2.747 (1.308)	2.100	0.037	
Size	-0.214 (0.070)	-3.062	0.002	1.556	-0.066 (0.024)	-2.776	0.006	1.443	-0.250 (0.063)	-3.952	0.000	1.425
BM	-0.373 (0.138)	-2.696	0.008	1.503	0.029 (0.050)	0.567	0.571	1.484	-0.356 (0.140)	-2.543	0.012	1.553
EY	-0.459 (0.161)	-2.848	0.005	2.008	0.476 (0.058)	8.162	0.000	1.883	-0.433 (0.152)	-2.859	0.005	1.853
CFY	-0.024 (0.093)	-0.261	0.794	1.530	0.016 (0.036)	0.443	0.658	1.528	-0.043 (0.094)	-0.453	0.651	1.514
Model Summary	F	7.020	P	0.000	F	48.531	P	0.000	F	7.835	P	0.000
	R^2	0.123	SEE	1.414	R^2	0.318	SEE	0.716	R^2	0.119	SEE	1.495
	Adjusted R^2	0.105	DW	1.767	Adjusted R^2	0.312	DW	1.602	Adjusted R^2	0.103	DW	1.921

Table 9 presents the results obtained from the ordinary least square method

of regression analysis showing the impact of different market risk and firm specific fundamental variables on all three measures of common stock returns separately for capital gain yield, dividend yield, and total yield for all samples companies. All the intercepts are the adjusted values from the auto-generated dummies created by software itself. The measures used for the common stock returns are capital gain yield, dividend yield, and total yield. The coefficients shown in the Table – 9 indicate the slope coefficients of different firm specific fundamental variables on common stock returns in the Nepali listed companies.

The results reveal that the F-statistics is significant at 1% level of significance for all three models used. The adjusted R2 shows the overall goodness of fit of the model which shows 0.105, 0.312, and 0.103 for CGY, DY, and TY respectively. More clearly, 10.5%, 31.2%, and 10.3% of the variations on capital gain yield and total yield are explained the independent variables used by the models. The high rates of overall goodness of the model fit further suggest that there is large scale of variables are covered by the models used. The observed values of DW test are (CGY = 1.769, DY = 1.602, & TY = 1.921) near 2 which suggest that there is no any problem of autocorrelation. The statistics further show that the VIF for all the variables used in both the models are less than 10. Therefore, it further confirms that there is no any multicollinearity problem exists among the variables. Therefore, the models used in the analysis are expected to be free of the problem of multicollinearity.

Table 9 reveals that the regression coefficients of market capitalization (size) on common stock returns are negative (CGY = -0.214, DY = -0.066, & TY = -0.250) and statistically significant at 1% significance level. The negative and significant coefficients further confirm that market capitalization has the significant negative impact on common stock return. More clearly, the higher the market capitalization (firm size), the lower would be the common stock returns in Nepali capital market. Thus, there is the sufficient evidences in favour of the research hypothesis that firm size has the significant negative impact on common stock returns in Nepali capital market.

Likewise, regression coefficients of book to market equity on common stock returns are negative (CGY= -0.373 & TY = -0.356) and statistically significant at 5% significance level. The significant negative beta coefficients further confirm that book to market equity has also negative impact on common stock returns. It means, the higher the book to market equity, the lower would be the common stock return in Nepali capital market. The negative impact of book to market equity contradicts with the findings of the existing literatures. Therefore, there is no any evidence to accept the research hypothesis that book to market equity has the significant positive impact on common stock returns in Nepali capital market.

Regarding earning yield, the regression coefficients are negative for two measures

of stock returns (CGY = -0.459 & TY = -0.433) and positive for DY (0.476) and statistically significant at 1% level of significance. The significant regression coefficients further confirm that earning yield has the significant negative impact on CGY and TY whereas positive impact on DY in Nepali capital market. More clearly, the higher the earning yield, the lower would be the CGY and TY. In contrast, the higher the earning yield, the higher would be the DY in Nepali capital market. Thus, there is sufficient evidence to accept the research hypothesis that earning yield has the significant positive impact on DY in Nepali capital market.

In contrast, the regression coefficients of cashflow yield are negative for CGY (-0.024) and TY (-0.043) and positive for DY (0.016, however the statistics shows the coefficients are not statistically significant at 5% level of significance. The insignificant coefficients further confirm that cashflow yield has the insignificant impact on the common stock return in Nepali capital market. Therefore, there is no sufficient evidences in support of research hypothesis that cashflow yield has the significant positive impact on common stock returns in Nepali capital market.

Table 10 presents the regression result of market risk on all three measures of common stock returns from all 28 BFIs sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 336 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. The reported values are intercepts and slope coefficients of respective explanatory variables with standard errors in parentheses. Also, reported are t-statistics, P-values, F-statistics, coefficients of determination (R^2 & Adjusted R^2), standard error of estimates (SEE), Variance Inflation Factor (VIF), and the values of Durbin Watson (DW) test.

$CGY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

$DY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

$TY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$

Table 10

Regression Results of Market Risk and Fundamental Variables on Common Stock Returns (BFIs Sample)

Variables	BFIs Sample (n = 336)											
	Capital Gain Yield (CYG)				Dividend Yield (DY)				Total Yield (TY)			
	Coefficients	t	P	VIF	Coefficients	t	P	VIF	Coefficients	t	P	VIF
Constant	4.336	2.106	0.037		0.972	1.744	0.082		4.647	2.259	0.026	
	(2.059)				(0.557)				(2.057)			

Size	-0.277 (0.099)	-2.792	0.006	1.644	-0.145 (0.026)	-5.584	0.000	1.619	-0.300 (0.096)	-3.112	0.002	1.686
BM	-1.049 (0.254)	-4.133	0.000	2.097	-0.066 (0.076)	-0.876	0.382	2.313	-0.890 (0.254)	-3.508	0.001	2.152
EY	0.208 (0.285)	0.732	0.466	2.519	0.341 (0.079)	4.326	0.000	2.553	0.138 (0.250)	0.551	0.583	2.109
CFY	-0.057 (0.127)	-0.447	0.655	1.538	-0.016 (0.041)	-0.389	0.698	1.638	-0.116 (0.127)	-0.916	0.361	1.471
Model Summary	F	5.069	P	0.001	F	29.537	P	0.000	F	4.066	P	0.004
	R^2	0.151	SEE	1.456	R^2	0.316	SEE	0.598	R^2	0.109	SEE	1.541
	Adjusted R^2	0.121	DW	1.746	Adjusted R^2	0.305	DW	1.761	Adjusted R^2	0.082	DW	1.959

Table 10 describes the results obtained from the ordinary least square method of regression analysis showing the impact of different firm specific fundamental variables on all three measures of common stock returns separately for capital gain yield, dividend yield, and total yield for the sample of BFIs. All the intercepts are the adjusted values from the auto-generated dummies created by software itself. The measures used for the common stock returns are capital gain yield, dividend yield, and total yield. Coefficients shown in the Table – 10 indicate the slope coefficients of different firm specific fundamental variables on common stock returns in the Nepali BFIs.

The results reveal that the F-statistics is significant at 1% level of significance in all three of the models used for the common stock returns. The adjusted R2 shows the overall goodness of fit of the model which shows 0.121, 0.305, and 0.082 for CGY, DY, and TY respectively and confirm that only the 12.1%, 30.5%, and 8.2% of the variation on common stock returns is explained by the explanatory variables used for BFIs in Nepali capital market. The observed values of DW test are (CGY = 1.746, DY = 1.761, & TY = 1.959) also near 2 which suggest that there is no any problem of autocorrelation. The statistics further show that the VIF for all the variables used in both the models are less than 10. Therefore, it further confirms that there is no any multicollinearity problem exists among the variables. Therefore, the models used in the analysis are expected to be free of the problem of multicollinearity.

The regression coefficients of firm size as a proxy of market capital are negative (CGY = -0.277, DY = -0145, & TY = -0.300) and statistically significant at 1%. The significant negative regression coefficients further confirm that market capitalization has the negative impact on common stock returns. Which means, the higher the market capitalization, the lower would be the common stock returns in Nepali banking and financial institutions. In the same way, the regression coefficients of book to market equity

are negative (CGY= -1.049, DY = -0.066, & TY = -0.890) and statistically significant at 1% significance level for CGY and TY. The negative and significant regression coefficients further confirmed that book to market equity has the significant negative impact on common stock returns. More clearly, the higher the book to market equity, the lower would be the common stock returns in Nepali banking and financial institutions. Likewise, the regression coefficients of cashflow yield are also negative in all measures of common stock returns (CGY = -0.057, DY = -0.016, & TY = -0.116). However, the statistics show that the coefficients are insignificant at 5% level of significance. The insignificant coefficients further confirm that cashflow yield has the insignificant negative impact on common stock return in Nepali banking and financial institutions.

In contrast, the regression coefficients of earning yield are positive for all measures of stock returns (CGY = 0.208, DY = 0.341, & TY = 0.138) however statistically significant at 1% significance level for DY (P = 0.000) only. The significant positive regression coefficient further confirm that EY has the significant positive impact on dividend yield. More clearly, the higher the earning yield, the higher would be the dividend yield in Nepali BFIs.

Table 11 presents the regression result of market risk on all three measures of common stock returns from all 14 insurance companies' sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 168 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. The reported values are intercepts and slope coefficients of respective explanatory variables with standard errors in parentheses. Also, reported are t-statistics, P-values, F-statistics, coefficients of determination (R^2 & Adjusted R^2), standard error of estimates (SEE), Variance Inflation Factor (VIF), and the values of Durbin Watson (DW) test.

$$CGY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$
$$DY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$
$$TY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$

Table 11

Regression Results of Fundamental Variables on Common Stock Returns (Insurance Companies)

Insurance Companies Sample (n = 168)												
Variables	Capital Gain Yield (CYG)				Dividend Yield (DY)				Total Yield (TY)			
	Coefficients	t	P	VIF	Coefficients	T	P	VIF	Coefficients	t	P	VIF

Constant	4.352 (1.878)	2.317	0.022		-0.019 (0.089)	-0.209	0.835		4.333 (1.914)	2.264	0.025	
Size	-0.249 (0.106)	-2.347	0.020	4.051	0.006 (0.005)	1.162	0.247	4.051	-0.243 (0.108)	-2.250	0.026	4.051
BM	-0.252 (0.117)	-2.156	0.033	1.495	0.007 (0.006)	1.270	0.206	1.495	-0.245 (0.119)	-2.057	0.042	1.495
EY	-0.432 (0.188)	-2.294	0.023	4.487	0.023 (0.009)	2.563	0.012	4.487	-0.409 (0.192)	-2.133	0.035	4.487
CFY	0.029 (0.106)	0.272	0.786	2.055	0.000 (0.005)	0.038	0.970	2.055	0.029 (0.108)	0.269	0.789	2.055
Model Summary	F	3.032	P	0.020	F	4.900	P	0.001	F	2.662	P	0.035
	R^2	0.084	SEE	1.153	R^2	0.129	SEE	0.055	R^2	0.075	SEE	1.175
	Adjusted R^2	0.056	DW	2.111	Adjusted R^2	0.103	DW	2.024	Adjusted R^2	0.047	DW	2.108

Table 11 presents the results obtained from the ordinary least square method of regression analysis showing the impact of different firm specific fundamental variables on both proxies of common stock returns separately for capital gain yield and total yield for the sample of insurance companies. All the intercepts are the adjusted values from the auto-generated dummies created by software itself. The measures used for the common stock returns are capital gain yield, dividend yield, and total yield. The coefficients shown in the Table – 11 indicate the slope coefficients of different firm specific fundamental variables on common stock returns in the Nepali insurance companies.

The results shown in model summary of the regression model reveal that the F-statistics is significant at 5% level of significance in all three models used. The adjusted R2 shows the overall goodness of fit of the model which shows 0.056, 0.103, and 0.047 for CGY, DY, and TY respectively and confirm that only the 5.6%, 10.3%, and 4.7% of the variation on common stock returns is explained by the explanatory variables used for insurance companies in Nepali capital market. The observed values of DW test are (CGY = 2.111, DY = 2.024, & TY = 2.108) also near 2 which suggest that there is no any problem of autocorrelation. The statistics further show that the VIF for all the variables used in both the models are less than 10. Therefore, it further confirms that there is no any multicollinearity problem exists among the variables. Therefore, the models used in the analysis are expected to be free of the problem of multicollinearity. The regression coefficients of firm size on common stock returns are negative for two of the measures (CGY = -0.249 & TY = -0.243) and statistically significant at 5% level of significance. The significant coefficients further confirm that firm size has the significant negative impact on common stock returns. More clearly, the higher the firm size, the lower would be the common stock returns from insurance companies operated in Nepali capital

market. Similarly, the book to market equity has also the significant negative regression coefficients for two of the measures of common stock returns (CGY = -0.252 & TY = -0.245). The significant negative regression coefficients further confirm that book to market equity has also significant negative impact on common stock returns from insurance companies operated in Nepali capital market.

On the other hand, the regression coefficients of earning yield are negative for capital gain yield (-0.432) and total yield (-0.409) and statistically significant at 5% level of significant. The significant negative coefficients further confirm that earning yield has the significant negative impact on capital gain yield and total yield. In contrast, the regression coefficient of earning yield is positive for dividend yield (0.028) and statistically significant at 5% level of significant confirming that earning yield has the significant positive impact on dividend yield among the insurance companies operated in Nepali capital market.

Regarding results of cashflow yield, all the regression coefficients are statistically insignificant at 5% level of significance. The insignificant regression further confirms that cashflow yield has the insignificant impact on common stock returns in insurance companies operated in Nepali capital market.

Table 12 presents the regression result of market risk on all three measures of common stock returns from all 6 other companies' sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 72 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. The reported values are intercepts and slope coefficients of respective explanatory variables with standard errors in parentheses. Also, reported are t-statistics, P-values, F-statistics, coefficients of determination (R^2 & Adjusted R^2), standard error of estimates (SEE), Variance Inflation Factor (VIF), and the values of Durbin Watson (DW) test.

$$CGY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$

$$DY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$

$$TY_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 BM_{it} + \beta_4 EY_{it} + \beta_5 CFY_{it} + \varepsilon_{it}$$

Table 12

Regression Results of Fundamental Variables on Common Stock Returns (Other Companies)

Variables	Other Companies Sample (n = 72)											
	Capital Gain Yield (CYG)				Dividend Yield (DY)				Total Yield (TY)			
	Coefficients	t	P	VIF	Coefficients	t	P	VIF	Coefficients	t	P	VIF

Constant	1.759	1.144	0.257		-0.070	-0.818	0.416		1.688	1.100	0.275	
	(1.538)				(0.086)				(1.535)			
Size	-0.060	-0.920	0.361	1.178	-0.030	-2.209	0.031	1.178	-0.056	-0.868	0.388	1.178
	(0.065)				(0.013)				(0.065)			
BM	-0.433	-1.796	0.077	1.067	0.003	0.949	0.346	1.067	-0.403	-1.676	0.098	1.067
	(0.241)				(0.004)				(0.240)			
EY	0.434	0.440	0.661	1.196	0.180	3.276	0.002	1.196	0.615	0.624	0.535	1.196
	(0.986)				(0.055)				(0.984)			
CFY	-0.065	-0.061	0.952	1.118	0.114	1.897	0.062	1.118	0.049	0.045	0.964	1.118
	(1.072)				(0.060)				(1.070)			
Model Summary	F	0.940	P	0.446	F	6.633	P	0.000	F	0.877	P	0.483
	R^2	0.053	SEE	0.742	R^2	0.284	SEE	0.041	R^2	0.050	SEE	0.741
	Adjusted R^2	-0.003	DW	2.149	Adjusted R^2	0.241	DW	2.107	Adjusted R^2	-0.007	DW	2.110

Table 12 presents the results obtained from the ordinary least square method of regression analysis showing the impact of different firm specific fundamental variables on all three measures of common stock returns separately for capital gain yield, dividend yield and total yield for the sample of other companies. All the intercepts are the adjusted values from the auto-generated dummies created by software itself. The measures used for the common stock returns are capital gain yield, dividend yield, and total yield. The coefficients shown in the Table – 12 indicate the slope coefficients of different firm specific fundamental variables on common stock returns for other sample firms.

The results shown in model summary of the regression model reveal that the F-statistics are insignificant (CGY = 0.446 & TY = 0.483) at 5% level of significance in both (CGY and TY) of the models used. Therefore, no further explanation is done for CGY and TY model. On the other hand, the F-static of DY model is significant (P = 0.000) at 1% level of significance. In addition, the adjusted R2 of the model DY is 0.241 which suggests that 24.1% of the variation on dividend yield is explained by the explanatory variables used for the model.

The results reveal that the regression coefficient of firm size on dividend yield is negative (-0.030) and statistically significant (P = 0.031) at 5% level of significance. The significant negative regression coefficient further confirms that firm size has the significant negative impact on dividend yield among the other companies' sample operated in Nepali capital market.

In contrast, the regression coefficient of earning yield on dividend yield are positive (0.180) and statistically significant at 1% level of significance confirming that earning yield has the significant positive impact on dividend yield among the other companies operated in Nepali capital market.

Regarding the variables book to market equity and cashflow yield, the regression coefficients show the insignificant impact on dividend yield.

Discussion

The summarized view of the test results obtained from the analysis for impact of firm specific fundamental variables on common stock returns for all samples and stratified sample groups are presented with the prior expectation (hypothesis) in Table – 13 and the obtained results are compared with the existing body of literature.

Table 13 presents the summary results of fundamental variables on all three measures of common stock returns from all 48 sample firms listed in the NEPSE for the study period of mid-July 2011 through mid-July 2022 with 576 observations. The dependent variables are Capital Gain Yield (CGY), Dividend Yield (DY), and Total Yield (TY). The independent variables are fundamental variables. Size is the Market Capitalization. BM is the Book to Market Equity. EY is the Earning Yield. And, CGY is the Cashflow Yield. The reported signs are expected and observed relationship between the dependent and independent variables.

Table 13

Comparison of Expected and Observed Relationship

Variables	Expected Sign	Capital Gain Yield (CGY)				Dividend Yield (DY)				Total Yield (TY)			
		All	BFIs	Insurance	Other	All	BFIs	Insurance	Other	All	BFIs	Insurance	Other
Size	-	-*	-*	-*	NA	-*	-*	+	-*	-*	-*	-*	NA
BM	+	-*	-*	-*	NA	+	-	+	+	-*	-*	-*	NA
EY	+	-*	+	-*	NA	+*	+*	+*	+*	-*	+	-*	NA
CFY	+	-	-	+	NA	+	-	+	+	-	-	+	NA

Where, '+' = Positive Impact, '-' = Negative Impact, '*' = Statistically Significant, and 'NA' = Model is Not Applicable

Market Capitalization (Size). Firm size which represents the market capitalization of the firm has the significant negative coefficients on both proxies of stock returns. The negative and significant coefficients further confirm that market capitalization has the significant negative impact on common stock returns. It means, the higher the market capitalization (firm size), the lower would be the common stock returns in Nepali capital market. The reason behind the finding may be that the high capitalization means the value of the asset already reached to the maximum level also known as overpriced and from that point the tendency to increase in price may be decline. Hence, the return to

the investors would be low. On the other hand, the tendency to increase in the price of underpriced asset will be high and gives the high rate of return to the investors. This condition is as exactly as the words of Banz (1981) that the smaller firms have had higher returns, on an average, than the larger firms. This finding supports the findings of other existing body of empirical findings such as Wong et al. (2006), Kumar and Sehgal (2004), and Shaker and Elgiziry (2014). Thus, there is the sufficient evidences in favour of the research hypothesis that firm size has the significant negative impact on common stock returns in Nepali capital market.

Book to Market Equity. Regarding the book to market ratio, the regression coefficients are negative and statistically significant on both of the proxies of stock returns (CGY & TY). The significant negative results further confirm that book to market equity has the negative impact on common stock returns. More clearly, the higher the book to market equity, the lower would be the common stock returns in Nepali capital market. The negative impact of book to market equity contradicts the research hypothesis and with the findings of the existing literatures such as Stattman (1980), Rosenberg et al. (1985), Fama and French (1992), and Chan et al. (1991) who have found book to market equity has the significant positive impact on cross-section of expected stock returns. One of the main reasons of contradiction in the finding may be that the existing literatures are from well-structured capital markets whereas, the present finding is from unstructured and emerging market where stocks prices are highly fluctuating even due to a small rumour.

Earning Yield (EY). Earning yield is the ratio between earning per share to market price per share has the significant negative regression coefficients on capital gain yield and total yield whereas significant positive regression coefficient on dividend yield. The significant negative regression coefficients further confirmed that earning yield has the significant negative impact on CGY and TY. In contrast, the significant positive regression coefficients for DY further confirm that earning yield has the significant positive impact on dividend yield in Nepali capital market. The findings of existing literatures are the significant and positive impact of earning yield (Ball, 1978 and Basu, 1983). Based on the conclusion derived from the analysis, there is sufficient evidences in favour of the research hypothesis that earning yield has the significant positive impact on stock returns (DY).

Cashflow Yield . Cashflow yield which is calculated as the ratio between operating cashflow to market price has the positive regression coefficients on stock returns, however the coefficients are statistically insignificant. The insignificant coefficients further confirm that cashflow yield has the insignificant impact on the common stock return in Nepali capital market. Although, this finding clearly supports the direction of impact as found by Chan et al. (1991), Cakici et al. (2011), the coefficients are statistically insignificant

as like in the existing findings. Based on the findings and the discussions, the research hypothesis that cashflow yield has the significant positive impact on common stock returns in Nepali capital market cannot be accepted.

Conclusion

The study was begun with the major objective of examining the impact of firm specific fundamental variables on cross-section of expected stock returns in Nepali capital market. Based on the results obtained from the analysis, the major conclusions drawn from all sample firms are firm size, book to market equity, and earning yield (for CGY & TY) have the significant negative impact on common stock returns in Nepali capital market. In contrast, earning yield has the significant positive impact on DY only. Cashflow yield has insignificant impact on common stock returns. Similarly, the results from BFIs sample confirmed that firm size and book to market equity both have the significant negative impact on common stock returns. In contrast, earning yield (for DY only) have the significant positive impact on common stock returns, whereas, cashflow yield has the insignificant impact on common stock returns in banking and financial institutions (BFIs) operated in Nepali capital market. The results from the insurance companies sample confirmed that firm size book to market equity and earning yield have the significant negative impact on capital gain yield and total yield, whereas, earning yield has the significant positive impact on dividend yield. Cashflow yield has no any significant impact on common stock returns among the insurance companies operated in Nepali capital market. And finally, the results from the other companies' sample confirmed that firm size has the significant negative impact on dividend yield whereas earning yield has the significant positive impact on dividend yield.

This study examined that the firm specific fundamental variables have significant role in predicting common stock returns. Therefore, the policy maker and the investors involving in capital market should consider these important factors while taking market related decisions. Similar kind of studies can be conducted by considering only capital gain yield as a measure of common stock returns since dividend yield do not have such a strong significant role as a measure of common stock returns. Hence, the number of observations also can be increased by taking monthly returns.

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