

# Firm Specific Attributes and Stock Returns: A Case of Nepalese Insurance Companies

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## Abstract

This paper empirically evaluates the explanatory power of the firm specific attributes such as size [Ln(ME)], book-to-market equity [Ln(BE/ME)], and net worth per share [Ln(NWPS)], on stock return ( $R_i$ ) of Nepalese insurance companies listed in Nepal Stock Exchange (NEPSE). The study covers the period of 2000/01 to 2017/18 with 12 insurance companies out of 22 listed insurance companies in NEPSE (Mid-July, 2018). The empirical analysis of this study concludes that, size [Ln(ME)], book-to-market equity [Ln(BE/ME)] and net worth per share [Ln(NWPS)] have explanatory power to explain the cross-section of stock return of Nepalese insurance companies. Among these variables book-to-market equity [Ln(BE/ME)] has strong explanatory power than other variables.

**Keywords:** Firm specific attributes, Insurance companies, Stock return, Nepal stock exchange, explanatory power.

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## 1. Introduction

Stock return is the one of the major factor for making investment decision in financial sector. So many models, theories and empirical evidences concluded that stock return is affected by various factors such as the single factor beta ( $\beta$ ) the systematic risk, unidentified risk factors such as interest rate, inflation rate, and firm specific variables such as size of the firm, the ratio of book equity to market equity, earnings yield, cash flow yield, dividend yield etc.

Sharpe (1964), Lintner (1965) and Mossin (1966) introduced the capital asset pricing model (CAPM). CAPM asserts that the expected returns on securities are positive linear function of their market betas ( $\beta$ s), the systematic risk and market  $\beta$ s are sufficient to describe the cross-section of expected return. Similarly, Ross (1976) formulated Arbitrage Pricing Theory (APT). According to Ross, expected return of an asset depends on various unidentified risk factors such as interest rate, inflation rate and so on.

In the context of developed capital market Banz (1981) concluded that market equity, ME (a stock's price times shares outstanding), adds to the explanation of the cross-section of average returns provided by market  $\beta$ s, Bhandari (1988) found that leverage is important for explaining expected return, Stattman (1980) and Rosenberg, Reid, and Lanstein (1985) concluded that average returns are positively related to the ratio of a firm's book value of common equity, BE, to its market value, ME, Basu (1983) showed that earnings-price ratios

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(E/P) help to explain the cross section of average returns. Furthermore, Barbee, Mukherji, and Raines (1996) concluded that sales price ratio and debt equity ratio had greater explanatory power for stock return than book to market ratio and size of the firm.

Similarly, in a comprehensive study by Fama and French (1992), the book-to-market value of equity ratio (BE/ME) and firm size, measured by the market value of equity (ME), emerged as the variables that have the strongest relations with the cross-section of average stock returns during the 1963-90 period. Fama and French also showed that the BE/ME consistently has the greatest power for explaining stock returns. In addition, they have found that a stock's beta does not have significant explanatory power and that the combination of the BE/ME and ME absorbs the roles of leverage and the earnings-price ratio in explaining stock returns.

Moreover, in the context of emerging capital market Aveh and Vitor (2017) had conducted a study using the data of listed company of Ghana stock exchange for the period of 2008 to 2014. The study of Aveh and Victor concluded that accounting information, specifically earning per share, return on equity, book value and market capitalization of the firms, is relevant for explaining stock prices. To determine the explanatory power of firm specific variables on stock price in Indian context, Sharma (2011) had conducted a study. The study of Sharma concluded that earning per share, dividend per share and book value per share has significant impact on the market price of share.

In the context of Nepalese capital market Pradhan (1993) has conducted the study on "small market behavior in a small capital market: a case of Nepal". Pradhan examined the relationship of market equity, market-to-book equity ratio, price-earnings ratio, and dividends with liquidity, leverage, profitability, assets turnover, and interest coverage. The study of Pradhan concluded that larger stocks have larger price earnings ratio, larger book-to-market equity ratio, lower liquidity, lower profitability, and smaller dividend. However, price earnings ratios and dividend ratios are more variable for smaller stocks whereas market value to book value of equity is more variable for larger stocks.

Shrestha (2011) conducted a study to observe the relationship between company attributes and common stock returns of the Nepalese stock market. Shrestha concluded that size (ME) has significant positive impact on stock return and book-to-market equity (BE/ME) has significant negative impact on stock return. Whereas the ratio of sales per share to stock price (S/P ratio) showed the negative and statistically significant coefficient in regression analysis.

Finally, Bhattarai (2018) has analyzed the effect of firm specific variables and macroeconomic variables on stock price of Nepalese commercial banks and insurance companies. Using the data of seven commercial banks and six insurance companies for the period of 2009/10 to 2014/15, Bhattarai concluded that the major firm specific variables that affect share price are ROE, ROA, EPS, DPS, P/E Ratio, size and major macroeconomic variables that affect share price are MS, GDPR, ER and IR in Nepalese context.

## 1.1 Rationale of the study

The insurance industry is a fastest growing industry of Nepal. Since the liberalization of 1990, the government has taken a number of initiations in the area of financial sector reforms including insurance. The first insurance company of Nepal is "Nepal Insurance and Transport Company Ltd" (now named Nepal Insurance Co. Ltd since 1991) which was established in

1947 Nepal Bank Limited (the first commercial Bank) ([www.nepalinsurance.com.np](http://www.nepalinsurance.com.np)). There are 22 insurance companies are listed in Nepal stock exchange till Mid-July 2018 out of them, one life insurance company (Rastriya Beema Sansthan) is life/ non-life, 7 companies are life insurance and 14 companies are non-life insurance companies. Insurance Board is an apex regulatory body of insurance companies in Nepal. Under the provisions of insurance Act and Regulation, Insurance Board has adopted the policy of facilitating the insurance companies to invest in the priority sectors.

The stocks of Nepalese insurance companies are preferred by majority of Nepalese investors. Thus, the stocks of Nepalese insurance companies are trading frequently in Nepal Stock Exchange. The market capitalization of insurance companies in mid-July 2018 was Rs 223921.77 million out of the total market capitalization of NEPSE Rs 1435137.67 millions which is 15.60 percent of total market capitalization and it is the 2<sup>nd</sup> largest market capitalization of NEPSE. Therefore, it is important to explore how different firm specific fundamental variables explain the stock returns of Nepalese insurance companies. Since, the main aim of this study is to evaluate the explanatory power of firm specific attributes on stock return of Nepalese insurance companies; this study does not consider all the firm specific attributes.

## 1.2 Objective of the study

The main objective of this study is to evaluate the explanatory power of firm specific attributes for explaining the stock return of Nepalese insurance companies. The other specific objectives are as follows:

- To identify the relationship between firm specific attributes and stock returns of Nepalese insurance companies.
- To analyze the explanatory power of firm specific attributes for explaining stock return of Nepalese insurance companies.
- To identify which firm specific variable has strong explanatory power for explaining stock return of Nepalese insurance companies.

## 1.3 Research Questions

In this study some firm specific fundamental variables such as size (ME), book-to-market equity (BE/ME), and net worth per share (NWPS) are taken as independent variable and stock return of Nepalese insurance companies are taken as dependent variable. Thus, this study deals with the following research questions:

- What kind of relationship exists between firm specific attributes and stock returns?
- Is there any explanatory power of firm specific attributes for explaining stock return of Nepalese Insurance Companies bank?
- Which firm specific attributes has most significant influence on stock return of Nepalese Insurance Companies?

This paper empirically investigates the explanatory power of firm specific attributes on stock returns of Nepalese insurance companies. The rest of the paper is organized as follows: *Section 2* describes the nature and sources of data. Method of analysis is discussed in *Section 3*. Similarly, variables and measures are described in *Section 4*. Furthermore, *Section 5* includes presentation and analysis of data. Finally, summary and conclusion are presented in *Section 6*.

## 2. Nature and Sources of Data

This study is solely based on the secondary source of data. The required data for the study are obtained from Nepal Stock Exchange (NEPSE), published annual reports of sample firms, Security Board of Nepal (SEBON) etc. There are 196 Nepalese enterprises listed in the NEPSE Ltd. by mid-July 2018, out of them there are 22 Insurance companies are listed. Out of 22 listed insurance companies, one life insurance company (Rastriya Beema Sansthan) is life/ non-life, 7 companies are life insurance and 14 companies are non-life insurance companies are listed which is regarded as the size of the population for this study. The sample has been selected from those 22 insurance companies which are listed by mid-July 2018. Out of 22 insurance companies 12 insurance companies (5 life insurance companies and 7 non-life insurance companies) has been selected as sample on the availability of the data. So, this study is confined to 12 insurance companies which represent 55 percentage of the population. The list of sample insurance companies are presented in appendix-I.

## 3. Method of Analysis

The basic objective of this study is to observe effect of firm specific fundamental variables on stock returns of Nepalese insurance companies. This study has adopted descriptive analysis correlation analysis and cross-sectional regression analysis. In descriptive analysis the characteristics of the variables under the study has been described. Similarly, to analyze the relationship between firm attributes and stock return of Nepalese insurance companies correlation analysis has been used. In the correlation analysis section, the correlations between the factors under study and stock returns are computed. In correlation analysis the correlation coefficients are calculated for the aggregate cross-sectional data on firm specific variables size [Ln(ME)], book-to-market equity [Ln(BE/ME)], net worth per share [Ln(NWPS)], and stock return ( $R_j$ ). To calculate the Correlation coefficient between two variables is computed using equation 1.

$$r_{ij} = \frac{\text{Cov}_{ij}}{\sigma_i \sigma_j} \quad (1)$$

Where,  $r_{ij}$  is the correlation coefficient between two variables  $i$  and  $j$ ,  $\text{Cov}_{ij}$  is the covariance between two variables  $\sigma_i$  and  $\sigma_j$  are the standard deviation of variable  $i$  and  $j$ .

Similarly, this study has adopted multivariate regression analysis to evaluate the explanatory power of firm attributes on stock return of Nepalese insurance companies. In an attempt to analyze explanatory power of firm attributes on stock return of Nepalese insurance companies, the study has performed regression of stock returns on each of the firm specific attributes in aggregate level, for life Insurance company only and for none-life insurance company only through multivariate regression analysis.

The basic model of multivariate regression analysis is specified in equation (2).

$$R_{it} = \alpha_0 + \alpha_1 \ln(ME)_{it} + \alpha_2 \ln(BE/ME)_{it} + \alpha_3 \ln(NWPS)_{it} + \varepsilon_{it} \quad (2)$$

Where,

- $R_{it}$  = the rate of returns of the stock of *i insurance company* for time *t*,  
 $\alpha_i$  = the coefficient of fundamental variable to be estimated,  
 $\ln(ME)_{it}$  = the log of the equity market capitalization of stock of *i insurance company* for time *t*,  
 $\ln BE/ME_{it}$  = the log the book-to-market equity ratio of stock of *i insurance company* for time *t*,  
 $\ln(NWPS)_{it}$  = the log of the net worth per share of stock of *i insurance company* for time *t*,  
 $\varepsilon_{it}$  = the residual error term.

#### 4. Variables and Measures

In this study stock return of insurance company is used as dependent variable size, book-to-market equity ratio, net worth per share is used as independent variable. The definition of these dependent and independent variables are described in the following paragraphs.

##### Stock Returns ( $R_j$ )

In this study annual stock price data and annual dividend data is used to estimate the stock return. Stock return is obtained as:

$$R_{i,t} = \frac{P_{it} - P_{it-1} + D_{it}}{P_{it-1}} \quad (3)$$

Where,  $R_{i,t}$  is the annual return for stock *i* at year *t*,  $P_{i,t}$  is the price of security *i* at the end of year *t* and  $P_{i,t-1}$  is the price at the beginning of that year and  $D_{i,t}$  is the dividend per share of stock *i* at the end of year *t*.

##### Firm Size [ $\ln(ME)$ ]

The firm size is the market capitalization of the stock. In this study equity market capitalization of sampled insurance companies is taken as size of insurance companies. Equity market capitalization is defined as number of share outstanding times closing price of the stock. In this study the natural logarithm of market capitalization,  $\ln(ME)$  is used as a proxy for firm size, in consideration of the size effect. Equity Market capitalization of firm *i* in year *t* is given by:

$$ME_{i,t} = (P_{i,t}) (NSO_{i,t}) \quad (4)$$

Where,  $P_{i,t}$  is the stock price for firm *i* at the end of June of year *t* and  $NSO_{i,t}$  is the number of shares outstanding for firm *i*, at that point in time.

##### Book-to-Market Equity Ratio (BE/ME)

The book-to-market equity ratio (BE/ME) is the ratio of book value of equity and market value of equity. It is used as another independent variable. The book-to-market ratio (BE/ME) is obtained as:

$$BE/ME_{i,t} = \frac{BE_{i,t-1}}{ME_{i,t-1}} \quad (5)$$

Where,  $BE_{i,t-1}$  is the book value of a firm's equity at the end of year  $t-1$  and  $ME_{i,t-1}$  is the market value of equity at the end of year  $t-1$ .

### Net Worth per Share (NWPS)

Net worth per share (NWPS) is used as another independent variable in this study. Net worth per share (NWPS) is obtained as:

$$NWPS_{i,t} = \frac{BE_{i,t-1}}{ME_{i,t-1}} \quad (6)$$

Where,  $SE_{i,t-1}$  is amount of shareholders equity of firm  $i$  at year  $t-1$  and  $N_{i,t-1}$  is the number of share outstanding of firm  $i$  at the end of year  $t-1$ .

## 5. Presentation and Analysis of Data

In this section, the analysis of secondary data collected from Securities Board of Nepal (SEBON), NEPSE, and annual report of the sample company is conducted. Book value of equity, cash flows, and net income after taxes are extracted from the financial statements of the sample companies. Similarly, information on market price per share, market capitalization, and market return are collected from the annual report published by SEBON and NEPSE.

### 5.1 Descriptive Statistics

As this study has adopted descriptive research design, descriptive statistics has been used to describe the characteristics of the variables under the study. The descriptive statistics (mean, median, standard deviation, range, minimum and maximum values) of the sample insurance company of the study for the period of 2000/01 to 2017/18 are presented in table 1.

**Table 1**

*Descriptive Statistics for the period of 2000/01 to 2017/18*

The table exhibits descriptive statistics (mean, median, standard deviation, range, minimum and maximum values) of the variable under the studied period of 2000/01 to 2017/18 for the 12 insurance companies listed on NEPSE with 167 observations. Size (ME) is calculated for a given year  $t$  by multiplying the number of shares outstanding with the stock price at the end of June of year  $t$  and denominated in millions of Nepalese rupees. Book-to-market equity ratio (BE/ME) is obtained by dividing the book value of equity of a company by the market value of equity. Net worth per share (NWPS) is the book equity divided by number of share outstanding, annual percentage stock return ( $R_j$ ) is calculated by appreciation in price of stock plus dividend divided by closing price of the stock.  $\ln(ME)$  is the natural logarithm of market value of equity used as a proxy for firm size.

	SIZE Rs. in million	NWPS (Rs)	BE/ME	R <sub>j</sub>
Mean	4973.7034	182.5995	.6032	42.5656
Minimum	45.0000	75.0000	.0366	-73.0150
Maximum	86830.0500	427.7400	2.1880	413.6429
Range	86785.0500	352.7400	2.1514	486.6579
Std. Deviation	12099.7671	62.5205	.4936	85.5437
Skewness	4.0328	1.3154	.8358	1.8328
Kurtosis	18.6685	2.4344	-.1601	3.1387

The value of equity market capitalization of common stock (Size) of Nepalese insurance companies ranges from minimum Rs 45 million to maximum Rs 86830.05 million with average of Rs 86785.05 million. This wide range of minimum and maximum value of market equity indicates that firms included in the sample vary significantly in terms of their size. Similarly, the mean value of book-to-market equity ratio (BE/ME) is .6032, where as it's minimum and maximum values are .0366 and 2.1880 respectively. Furthermore, the mean, minimum and maximum value of net worth per share is Rs 182.5995, Rs 75 and Rs 427.74. Similarly, the stock return (R<sub>j</sub>) ranges from minimum negative -73.0150% to maximum 413.6429 %, with average return of 486.6579%. Thus, the large rage of the stock return of sampled insurance companies indicates that the firms included in the sample vary significantly in terms of their stock return also. Furthermore, the statistics of Skewness showed that all variables are positively skewed.

5.2 Correlation Analysis

The correlation coefficients between annual stock return (R<sub>j</sub>) of Nepalese insurance companies on size [Ln(ME)], net worth per share [Ln(NWPS)], and book-to-market equity ratio [Ln(BE/ME)] have been calculated for the period of 2000/01 to 2017/18. Table 2 depicts the result of correlation coefficient between the variables under study.

Table 2  
Correlation Results

The Pearson correlation coefficients are calculated for earnings yield (E/P), cash flow yield (C/P), size [Ln(ME)], net worth per share [Ln(NWPS), book-to-market equity ratio [Ln(BE/ME)] and, annual returns. The variables for which correlation tests are conducted are defined below.

- Ln(ME) = Natural logarithm of market value of equity,
- BE/ME = Book value of equity divided by the market value of equity,
- Ln(NWPS) = Natural logarithm of the net worth per share of stock,
- (R<sub>j</sub>) = Change in stock price during a year plus dividend per share divided by the stock price at the beginning

	LnME	LnNWPS	LnBE/ME	R <sub>j</sub>
LnME	1			
LnNWPS	-.110	1		
LnBE/ME	-.927**	.239**	1	
R <sub>j</sub>	.370**	.086	-.435**	1

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

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



The result of correlation analysis shows that there positive and significant correlation between rate of return ( $R_j$ ) and equity market capitalization [ $\ln(\text{ME})$ ]. The correlation between  $\ln(\text{ME})$  and  $R_j$  is .370 which is significant at one percent level of significant.

Similarly, the correlation coefficient between  $\ln(\text{NWPS})$  and  $R_j$  is .086 but insignificant. Finally, the negative correlation between  $\ln(\text{BE/ME})$  and  $R_j$  has been observed. The correlation coefficient between these two variables found to be negative .435 which significant at 1 percent level of significant.

### 5.3 Regression Analysis

The cross-sectional multivariate regression model is estimated using the annual returns of individual firms as the dependent variable, and firm specific attributes as the explanatory variables. Interpretations on the factors' influence on stock return are based on t-values and p values. Regression Model 1 is estimated for all sampled insurance company, regression Model 2 is estimated for life insurance company and Model 3 is estimated for non-life insurance company using the basic model presented in equation 2.

#### Model I

$R_{it}$	=	-247.442**	- 19.263 ** $\ln(\text{ME})_{it}$	- 74.581*** $\ln(\text{BE/ME})_{it}$	+ 67.590*** $\ln(\text{NWPS})_{it}$
se	=	98.245	8.357	16.091	19.571
t	=	(-2.519)	(-2.305)	(-4.635)	(3.452)
p	=	.013	.022	.000	.001
Adjusted $R^2$ = .238		F = 18.280 **		DW = 1.927	N = 167

(Note: \*\*\* significant at one percent, \*\* significant at five percent, \* significant at ten percent.)

Model 1 presents the result of cross-sectional multivariate regression of all sampled insurance companies. The rate of return of Nepalese insurance companies ( $R_j$ ) is dependent variable and size [ $\ln(\text{ME})$ ], net worth per share [ $\ln(\text{NWPS})$ ], book-to-market equity ratio [ $\ln(\text{BE/ME})$ ] are independent variables. The F statistics of Model 1 is 18.280 which is significant at 1 percent level of significant which indicates that the model is best fit. Similarly, the adjusted  $R^2$  of is 23.8% which indicates that the dependent variable is explained by 23.8 percent by independent variables included under the study. The coefficient of  $\ln(\text{ME})$  is negative 19.263 which is significant at 5 percent level of significant and the coefficient of  $\ln(\text{BE/ME})$  is negative -74.581 which is significant at 1 percent level of significant. Finally, the coefficient of  $\ln(\text{NWPS})$  is 67.590 which is significant at 1 percent level of significant. Furthermore, DW statistics 1.927 indicates that there is no evidence of autocorrelation.

#### 5.3.1 Multicollinearity Test of the Variables

To check the multicollinearity of the independent variable of model 1 variance influence factor (VIF) is used. The result of VIF is presented in table 3. As per table 3 all independent variables have VIF value less than 10 which is the evidence of no multicollinearity of the independent variables. Thus, this model is free from the problem of multicollinearity.



**Table 3**  
*Value of Variance Influence Factor (VIF) of Independent Variables*

<i>Variables</i>	<i>VIF</i>
<i>LnME</i>	7.868
<i>LnBEME</i>	8.244
<i>LnNWPS</i>	1.171

**Model 2**

$R_{it} =$	-390.249**	- 21.404 $Ln(ME)_{it}$	- 60.250** $Ln(BE/ME)_{it}$	+ 104.318*** $Ln(NWPS)_{it}$
$se =$	163.468	13.545	24.282	34.347
$t =$	(-2.387)	(-1.580)	(-2.481)	(3.037)
$p =$	.021	.120	.016	.004
	Adjusted $R^2 = .153$	$F = 4.361^{**}$	$DW = 1.99$	$N = 57$

(Note: \*\*\* significant at one percent, \*\* significant at five percent, \* significant at ten percent.)

Model 2 presents the result of cross-sectional multivariate regression of life insurance companies only. The F statistics of Model 2 is 4.361 which is significant at 5 percent level of significant which indicates that the model is best fit. Similarly, the adjusted  $R^2$  of is 15.3%. The coefficient of  $Ln(ME)$  is negative 21.404 and statistically insignificant. The coefficient of  $Ln(BE/ME)$  is negative -60.250 which is significant at 5 percent level of significant. Finally, the coefficient of  $Ln(NWPS)$  is 104.318 which is significant at 1 percent level of significant. Moreover, DW statistics 1.99 indicates that there is no evidence of autocorrelation.

**5.3.2 Multicollinearity Test of the Variables**

Similarly, the multicollinearity of the independent variable of model 2 is examined through variance influence factor (VIF). The result of VIF is presented in table 4. As depicted in table 4 all independent variables have VIF value less than 10 which is the evidence of no multicollinearity of the independent variables. Thus, this model is free from the problem of multicollinearity.

**Table 4**  
*Value of Variance Influence Factor (VIF) of Independent Variables*

<i>Variables</i>	<i>VIF</i>
<i>LnME</i>	4.625
<i>LnBEME</i>	4.747
<i>LnNWPS</i>	1.209

**Model 3**

$R_{it} =$	-79.924	- 21.807* $Ln(ME)_{it}$	- 93.950*** $Ln(BE/ME)_{it}$	+ 36.676 $Ln(NWPS)_{it}$
$se =$	125.857	11.213	21.330	25.473
$t =$	(-.635)	(-1.945)	(-4.405)	(1.440)
$p =$	.527	.054	.000	.153
	Adjusted $R^2 = .298$	$F = 16.407^{***}$	$DW = 1.926$	$N = 110$

(Note: \*\*\* significant at one percent, \*\* significant at five percent, \* significant at ten percent.)

Finally, result of cross-sectional multivariate regression of non-life insurance companies have been presented in Model 3. The F statistics of Model 3 is 16.407 which is significant at 1 percent level of significant. Similarly, the adjusted  $R^2$  of is 29.8%. The coefficient of  $\text{Ln}(\text{ME})$  is negative 21.807 which is significant at 10 percent level of significant. The coefficient of  $\text{Ln}(\text{BE}/\text{ME})$  is negative -93.950 which is significant at 1 percent level of significant. Finally, the coefficient of  $\text{Ln}(\text{NWPS})$  36.676 is found statistically insignificant. Moreover, DW statistics 1.926 indicates that there is no evidence of autocorrelation.

5.3.3 Multicollinearity Test of the Variables

Finally, the multicollinearity of the independent variable of model 3 has been evaluated through variance influence factor. The result of VIF is presented in table5. As depicted in table 5 all independent variables have VIF value less than 10 which is the evidence of no multicollinearity of the independent variables. Thus, this model is free from the problem of multicollinearity.

Table 5  
Value of Variance Influence Factor (VIF) of Independent Variables

Variables	VIF
<i>LnME</i>	6.678
<i>LnBEME</i>	6.521
<i>LnNWPS</i>	1.133

6. Summary and Conclusion

This study has evaluated the explanatory power of firm-specific attributes including size (ME), book-to-market equity (BE/ME), and net worth per share (NWPS), on average stock returns of Nepalese insurance companies listed on Nepal Stock Exchange. For this purpose of the study 12 insurance companies (5 life and 7 non-life) out of 22 insurance companies listed on NEPSE (Mid-July, 2018) has been taken as sample of the study. The study covers the period of 2000/01 to 2017/18 with 167 observations.

The results confirm some of the existing evidences of developed markets, but contradictory findings are also brought to light. The result of this study concluded that the equity market capitalization of the firm [ $\text{Ln}(\text{ME})$ ], the ratio book equity to market equity [ $\text{Ln}(\text{BE}/\text{ME})$ ] have negative impact on stock return and net worth per share [ $\text{Ln}(\text{NWPS})$ ] have positive impact on average stock return of Nepalese insurance companies. The coefficient of  $\text{Ln}(\text{ME})$  has been found to be negative and significant in Model 1 (all insurance companies) and in Model 3 (non-life insurance companies) but the significance of  $\text{Ln}(\text{ME})$  has been loosed in Model 2 (life insurance companies). The finding of size effect is similar with the findings of in many developed countries such as Banz (1981), Chan, Hamao, and Lakonishok (1991), and Fama and French (1992) in U.S. and Japanese markets. Size is significant with the negative sign, which indicates that small firms tend to outperform large firms.

Similarly, the coefficient of  $\text{Ln}(\text{NWPS})$  has been found positive and significant in Model 1 (all insurance companies) and Model 2 (Life Insurance companies) but its significance has been loosed in Model 3 (non-life insurance companies). Finally, the coefficient of  $\text{Ln}(\text{BE}/\text{ME})$  has been found to be negative and significant in all Models. This result is contradicts with the

result of Stattman (1980) who found that firms with high BE/ME ratios outperformed firms with low BE/ME equity and Rosenberg, Raid and Lastein (1985) who also documented a significant positive relation between BE/ME and average return on U.S. stocks.

Since  $\ln(\text{BE/ME})$  has sowed significant and negative coefficient in all models, this study, therefore, concludes that book to market equity [ $\ln(\text{BE/ME})$ ] has strongest explanatory power for explaining the stock return of Nepalese insurance companies listed on Nepal Stock Exchange than other variables taken in this study i. e.  $\ln(\text{ME})$  and  $\ln(\text{NWPS})$ .

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## Appendix: List of Sample insurance companies

S.No.	Name of the Commercial Bank	Type	Sample Period	No. of Observations
1	Asian Life Insurance Co. Ltd.	Life	2010/11-2016-17	7
2	Everest Insurance Co. Ltd.	Non-life	2009/07/-2017/18	12
3	Himalayan Gen. Insu. Co.Ltd.	Non-life	2000/01-2017/18	18
4	Life Insurance Co. Nepal	Life	2003/04-2017/18	15
5	Lumbini General Insurance	Non-life	2008/09-2017/18	10
6	National Life Insurance Co. Ltd.	Life	2004/05-2017/18	14
7	Neco Insurance Co.	Non-life	2000/01-2017/18	18
8	Nepal Life Insurance Co. Ltd.	Life	2003/04-2017/18	15
9	Premier Insurance co. Ltd.	Non-life	2000/01-2017/18	18
10	Prime Life Insurance Co Ltd.	Life	2010/11-2016/17	7
11	Sagarmatha Insurance Co. Ltd	Non-life	2001/02-2016/17	15
12	United Insurance Co.(Nepal)Ltd.	Non-life	2000/01-2017/18	18
<b>Total</b>				<b>167</b>