



# Effect of Firm-Specific Variables on Stock Returns: Evidence from Nepal

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## Abstract

**Background:** Common stock return is a major concern for investors and the management of the firm. Investors always want to increase their values of common stock; thus, they always want to increase common stock returns. The investor for investment prefers the company that provides better common stock return. Thus, the management of the firm always wants to increase common stock returns. The common stock return is affected by so many internal and external factors. Internal factors are the firm-specific factors that the firm's management can control, and external factors are the macroeconomic factors that the individual firm cannot control. Generally, firm-specific factors include the size of the firm, book-to-market equity, earnings yield, cash flow yield, dividend yield, leverage, return on assets, sales-to-price ratio etc. If the firm's management identifies these factors influence, they can increase their common stock return.

**Objective:** This paper aims to investigate the effect of firm-specific variables on the stock return of Nepalese commercial banks.

**Methods:** To observe the influence of firm-specific variables on stock return of Nepalese commercial banks, multivariate regression analysis have been applied. In regression analysis stock return is taken as dependent variable and firm-specific variables such as size (lnME), book-to-market equity (BE/ME), earnings yield (E/P), dividend yield (D/P), return on assets (ROA), earning per share (EPS), sales per share to stock price (S/P) ratio have been taken as explanatory variables.

**Findings:** This paper finds the positive impact of D/P and EPS, and the negative effect of E/P, ROA and S/P ratio on the stock return of Nepalese commercial banks.

**Conclusions:** This paper concludes that Nepalese commercial banks can increase common stock return by increasing D/P and EPS and lowering E/P, ROA and S/P ratios.

**Implication:** The findings of this study can be implemented by investors for investment decisions and bank management to maximize the stock returns of Nepalese commercial banks.

**Paper Type:** Research paper

**Keywords:** Stock return, Book-to-market equity, Equity market capitalization, Earnings yield, and Dividend yield.

**JEL Classification:** G10, G21

## Introduction

Common stock returns that depend on a nation's financial market development and economic growth are the major concern for investors and management of the firm. Financial development is the result of the expansion of the financial market and banking systems. Stock return is the major component of the development of the financial market. The effective performance of the stock market speeds up the financial market development, affecting the stock return. Stock price, stock market capitalization, stock turnover, stock market index, etc., measure the stock market performance that affects risk and stock return (Adjasi & Biekpe, 2006). Stock prices, risks, returns etc., are immense concerned issues in finance and economics literature (Yaseer & Shaji, 2018; Wibowo & Darmanto, 2020; Surjandari, Nurlaelawati & Soma, 2020; Kim, 2021). To explain the relationship between risk and return, Markowitz (1952) developed the Portfolio Theory, Sharpe (1964), Lintner (1965) and Mossin (1966) developed Capital Asset Pricing Model (CAPM), and Ross (1976) developed the Arbitrage Pricing Theory (APT).

Likewise, empirical studies such as Shafana, Rimziya and Jariya (2013), Arslan and Zaman (2014), Abraham, Harris and Auerbach (2017), Surjandari, Nurlaelawati, and Soma (2020), Nugroho (2020), Kim (2021) etc., documented firm-specific factors, for example, firm size, book-to-market equity, dividend yield, cash flow yield, earnings yield, liquidity and leverage etc. play a significant role in explaining the cross-section of common stock returns. Thus, different firm-specific factors and macroeconomic variables affect the stock return of different sectors. For example, commercial banks, finance companies, hotels, manufacturing and processing, hydropower, trading, development, microfinance, and insurance companies are traded in the Nepalese stock market. The Nepalese stock market is largely dominated by the trading of stocks of commercial banks (SEBON, 2018). Thus, this study focuses on analyzing the influence of some firm-specific variables such as size (ME), book-to-market equity (BE/ME), earnings yield (E/P), dividend yield (D/P), earning per share (EPS), return on assets (ROA) and sales per share to stock price (S/P) ratio on stock return of Nepalese commercial banks. In this way, it addresses the research questions (a) is there any explanatory power of firm-specific variables for explaining stock return and which firm-specific variable has the most significant influence on Nepalese commercial banks? and (b) what kind of relationship exists between firm-specific variables and the stock return of Nepalese commercial banks?

The basic objective of this study is to empirically investigate the effect of firm-specific variables on the stock return of Nepalese commercial banks. The rest of the paper is organized as follows: Section II presents the literature review, and Section III describes the methodology. Section IV deals with results and discussion. Finally, Section V concludes the findings and implications of the paper.

## Review of Literature

Markowitz (1952) showed how to create portfolios of individual investments for the optimal trade-off of risk and return. According to Markowitz (1952), the variance of return is the meaningful measure of portfolio risk under some assumptions. A single asset or portfolio of assets is considered efficient if no other assets provide a higher expected return with the same or lower level of risks and lower risk with the same or higher expected returns. Similarly, after the concurrent studies of Sharpe (1964), Lintner (1965) and Mossin (1966), Capital Asset Pricing Model (CAPM) emerged as another important theory for explaining the expected returns of securities. As per the CAPM, the expected returns on securities are a positive linear function of their market betas ( $\beta$ s) and the market beta, i.e., the systematic risk, is the most important factor in determining the expected return. In addition, Ross (1976) developed the alternative CAPM theory known as Arbitrage Pricing Theory (APT). According to APT, rather than the single factor, i.e., beta, the expected returns of assets are affected by several macroeconomic variables such as interest rate, inflation rate, etc.

Several empirical evidence (Jamal & Mujtaba, 2019; Mroua & Trabelsi, 2020; Surjandari, Nurlaelawati

& Soma, 2020; Nugroho, 2020; Kim, 2021; Omodero, Adetula & Adeyemo, 2021) showed that firm-specific variables and macroeconomic variables make significance effect on stock return. In this concern, Banz (1981) found that the size of the firm has more explanatory power to explain the cross-section of average returns than market beta. Moreover, Bhandari (1988) observed leverage as an important factor in explaining expected return. Stattman (1980) and Rosenberg et al. (1985) argued that the book-to-market equity ratio is the most influencing factor in explaining average stock returns. Chan et al. (1991) also verified the influence of book-to-market equity in Japanese stocks. Basu (1983) found earnings-price ratios (E/P) as the strongest internal factor explaining the cross-section of average returns for US stocks. The recent studies by Surjandari, Nurlaelawati, and Soma (2020) and Mahfudz and Wijayanto (2020) documented the significant impact of size and Kim (2021) and Anandasayanan (2018) verified the significant impact of dividend yield on stock return.

In another study, Fama and French (1992) revealed a strong relationship between the book-to-market equity ratio (BE/ME) and firm size (ME) with the cross-section of average stock returns for the period 1963-90. Fama and French (1992) also documented that the BE/ME has the greatest power for explaining stock returns. In addition, they have found that a stock's beta does not have significant explanatory power. They concluded that the BE/ME and ME also capture the explanatory power of leverage and the earning price ratio. Contrary to the prior findings, Matteev (2004) found a significant negative relation between beta with average stock return. In addition, this study observed a marginally significant positive risk premium of size with average return and insignificant positive relation of book-to-market equity with an average return in all regressions. Likewise, Varga and Brito (2016) found no significant role of market beta and size in explaining average stock returns. Varga and Brito (2016) revealed a strong positive impact of the book-to-market ratio on average stock returns in the Brazilian capital market.

Anwaar (2016) used the panel data from 2005 to 2014 and found a significant positive impact on return on assets and net profit margin in assessing the impact of firm performance on the London Stock Exchange stock return. Moreover, the estimated results of the study reported a significant negative impact on earnings per share and an insignificant impact on return on equity and quick ratio on stock returns. In the same way, Zainudin, Mahdzan and Yet (2018) found a significant negative impact of dividend yield on stock price volatility of the Malaysian stock market. The earnings yield has a positive influence, whereas dividend yield and earnings per share significantly negatively affect on stock return (Anandasayanan, 2018). In Nepal, Pradhan (1993, 2003) documented that firm-specific fundamental factors significantly explain the variation in the expected common stock returns. Similarly, Bhattarai (2014) observed the significant positive impact of EPS and PE and the negative impact of D/Y on the stock return of Nepalese commercial banks. Likewise, Gautam (2017) found a positive influence of leverage, market capitalization, dividend payout and dividend yield and a negative influence of book-to-market, growth of assets, and earning price ratio on stock returns. In another study, Silwal and Napit (2019) documented a significant positive impact of book value per share, price earnings, and return on equity and a significant negative influence of firm size on stock return.

All the above studies clearly illustrate that different firm-specific factors have played a significant role in explaining the variation in the cross-section of common stock return in various capital markets, but the results are inconclusive. Thus, this study aims to analyze the role played by firm-specific factors in explaining the variation in common stock returns of Nepalese commercial banks.

## Research Methods

### *Research Design*

This paper has used descriptive research design to describe the characteristics and status of the variables under the study. Additionally, a causal research design is also employed to investigate the influence

of firm-specific variables on the stock return of Nepalese commercial banks. Furthermore, Pearson's correlation is also estimated to analyze the directions of the relationship of explanatory variables with stock return. Finally, this paper has estimated multiple regression models using unbalance panel data to examine the impact of firm-specific variables (explanatory variables) on the stock return of commercial banks in Nepal.

### ***Nature and Sources of Data***

This study is solely based on the secondary source of data. The required data for the study have been obtained from Nepal Stock Exchange (NEPSE), published annual reports of sample firms, the Security Board of Nepal (SEBON), etc.

### ***Population and Sample Size***

There are 27 commercial banks listed in NEPSE till mid-July 2018, the size of the population. The sample has been selected from those 27 commercial banks listed by mid-July 2018. Those banks are selected as a sample which has at least one trading per month in NEPSE during 2002/03-2017/18. Out of 27 commercial banks, 18 banks fulfilled this criterion and were selected as the sample representing 67 per cent of the population. The list of sample commercial banks are presented in appendix-I.

### ***Method of Analysis***

The main purpose of this study is to observe the effect of firm-specific variables (fundamental variables) on the stock returns of Nepalese commercial banks. For this purpose, descriptive statistics, correlation, and panel regression analyses have been applied. To observe the relationship between firm-specific variables and the stock return of Nepalese commercial banks, we used correlation analysis. The correlation analysis section estimates the relationship between firm-specific factors and stock return. Correlation coefficients are calculated for the aggregate cross-sectional data on firm-specific variables such as size ( $\ln ME$ ), book-to-market equity ( $BE/ME$ ), earnings yield ( $E/P$ ), dividend yield, return on assets ( $ROA$ ), earning per share ( $EPS$ ), sales per share to stock price ( $S/P$ ) ratio and stock return ( $R_j$ ). The correlation between two variables is computed using equation 1.

$$r_{ij} = \frac{Cov_{ij}}{\sigma_i \sigma_j} \quad \dots(1)$$

$r_{ij}$  is the correlation coefficient between two variables  $i$  and  $j$ ,  $Cov_{ij}$  is the covariance between two variables,  $\sigma_i$  and  $\sigma_j$  are the standard deviations of variables  $i$  and  $j$ .

Similarly, multivariate regression analysis has been applied to observe the influence of firm-specific variables on the stock return of Nepalese commercial banks. In an attempt to analyze the influence of firm-specific variables on the stock return of Nepalese commercial banks, this paper has performed regression using stock returns as the dependent variable and firm-specific variables as explanatory variables. The basic model is specified in equation (2).

$$R_{it} = \alpha_0 + \alpha_1 \ln(ME)_{it} + \alpha_2 (BE/ME)_{it} + \alpha_3 (E/P)_{it} + \alpha_4 (D/P)_{it} + \alpha_5 (EPS)_{it} + \alpha_6 (ROA)_{it} + \alpha_7 (S/P)_{it} + \epsilon_{it} \dots(2)$$

$R_{it}$  is the returns (change in stock price during a year plus dividend per share divided by the stock price at the beginning) on stock  $i$  for time  $t$ ,  $\alpha_i$  refers to the coefficient of the fundamental variable to be estimated.  $\ln(ME)_{it}$  indicates the natural logarithm of the equity market capitalization of stock  $i$  for time  $t$ .  $BE/ME_{it}$  represents the book-to-market equity ratio (book value of equity divided by the market value of equity) of stock  $i$  for time  $t$ ,  $E/P_{it}$  is the earnings yield (net income after taxes divided by the market value of equity) of stock  $i$  for time  $t$ .  $D/P_{it}$  represents the dividend yield of stock  $i$  for time  $t$ .  $EPS_{it}$  means earnings per share (net income divided by the number of shared outstanding) of stock  $i$  for time  $t$ .  $ROA_{it}$  presents the return on assets (net income divided by total assets) of stock  $i$  for time  $t$ ,  $S/P_{it}$  is the sales to price ratio of stock  $i$  for the year  $t$  obtained by dividing the annual sales per share of firm  $i$  for the year

$t$  by the closing price of the common stock of firm  $i$  for year  $t$  and  $\varepsilon_{it}$  is the residual error term.

For the selection of appropriate regression model among the Pooled OLS, Random Effect and Fixed Effect model Hausman test and Breusch and Pagan Lagrangian multiplier test are applied.

## Data Analysis and Results

This section analyses secondary data collected from the Securities Board of Nepal (SEBON) database, NEPSE database and annual reports of sample banks. The results of descriptive statistics, correlation analysis and regression analysis, are presented as follows:

### *Descriptive Statistics*

The descriptive statistics of sample commercial banks for the period 2002/03- 2017/18 are presented in Table 1.

**Table 1 Descriptive Statistics**

Variables	Mean	Standard Deviation	Minimum	Maximum
Rate of return (R)	45.36	69.527	-77.558	341.591
Firm size or ME (Rs. in millions)	20,535.73	21,841.273	687.5	111,494
BE/ME	0.3266	0.2872	0.0546	3.1561
E/P	0.0568	0.068	0.0039	0.5991
D/P	0.0414	0.0346	0	0.2979
EPS (Rs.)	38.395	30.87754	0.55	175.84
ROA	0.0616	0.2849	-0.0099	2.44
S/P	0.3841	0.8162	0.0341	7.6281

*Source: NEPSE, SEBON, and Annual Reports of Sample Banks (2002/03-2017/18).*

Table 1 shows that commercial banks' stock return (R) ranges from a minimum negative 77.558 per cent to a maximum of 341.591 per cent, with an average return of 45.36 per cent. Similarly, the value of firm size (equity market capitalization, ME) of Nepalese commercial banks ranges from a minimum of Rs 687.5 million to a maximum of Rs 111,494 million, with an average of Rs 20,535.73 million. This wide range of minimum and maximum market equity value indicates that firms included in the sample vary significantly in size. Similarly, the mean value of the book-to-market equity ratio (BE/ME) is 0.3266, whereas its minimum and maximum values are 0.0546 and 3.1561, respectively. The mean, minimum and maximum values of earnings yield (E/P) are 0.0568, 0.0039 and 0.5991, respectively.

Furthermore, the mean, minimum and maximum value of dividend yield is 0.0414, 0.000 and 0.2979. The firms also differ in earnings per share (EPS). It ranges from a minimum of Rs 0.55 to a maximum of Rs 175.84, indicating that the banks with very lower and higher EPS are included in the sample. Likewise, the mean value of return on assets (ROA) is found to be 0.0616. It ranges from a minimum value of -0.0099 to a maximum of 2.44. Finally, the sales per share to stock price (S/P) ratio shows a mean value of 0.3841 with a minimum value of 0.0341 to a maximum value of 7.6281.

### *Relationship among the Variables*

In this paper, the correlation coefficient is applied as a measure of a linear relationship in explaining the direction and magnitude of different pairs of factors and the stock return of commercial banks. Table 2 depicts the correlation coefficient of different variables to explain the relationship between stock return and its explanatory variables for the period 2002/03-2017/18.

**Table 2 Correlation Results**

Variables	R	ln(ME)	BE/ME	E/P	D/P	EPS	ROA	S/P
R	1.000	.224**	-.317**	-.199**	.118	.581**	-.126	-.201**
ln(ME)	-	1.000	-.360**	-.216**	.081	.277**	-.031	-.301**
BE/ME	-	-	1.000	.744**	.097	-.201**	.033	.255**
E/P	-	-	-	1.000	.128	.177**	.065	.190**
D/P	-	-	-	-	1.000	.148*	.075	.122
EPS	-	-	-	-	-	1.000	.002	-.044
ROA	-	-	-	-	-	-	1.000	-.044
S/P	-	-	-	-	-	-	-	1.000

Source: NEPSE, SEBON, and Financial Reports of Sample Banks (2002/03-2017/18).

Note: \*Significant at the 1% level and \*\*Significant at the 5% level

The result of Table 2 depicts the statistically significant positive relationship of common stock return (R) with equity market capitalization [Ln(ME)], earnings per share (EPS), and a statistically insignificant positive relationship with dividend yield (D/P). On the other hand, the common stock return shows a statistically significant negative relationship with book-to-market equity (BE/ME), earnings yield (E/P), return on assets (ROA) and sales per share to stock price (S/P) ratio.

Table 2 also shows a statistically significant negative correlation of size (lnME) with BE/ME, E/P, and S/P. The correlation coefficient between ln(ME) and ROA is negative, and Ln(ME) with D/P is positive but statistically insignificant. On the other hand, ln(ME) shows a statistically significant positive correlation with EPS. BE/ME displays a negative and statistically significant correlation with EPS. Similarly, a statistically significant positive correlation of BE/ME with E/P and S/P has been observed.

Likewise, the correlation coefficient of E/P with EPS and S/P is positive and statistically significant, whereas the correlation coefficient of E/P with D/P and ROA is insignificantly positive. D/P shows a significant positive correlation with EPS and an insignificant positive correlation with ROA and S/P, EPS shows an insignificant positive correlation with ROA and an insignificant correlation with S/P, and ROA shows an insignificant negative correlation with S/P.

### ***Impact of Firm-specific Variables on Stock Returns***

Since this paper is based on the unbalanced panel data, it is assured whether the data are fit for Pooled OLS model or the Random/Fixed Effect model before estimating the multiple regression model. For this purpose, the Hausman test is applied to select the appropriate model between the Random Effect model and the Fixed Effect model, and Breusch and Pagan Lagrangian multiplier test is applied to select an appropriate model between the Random Effect model and Pooled OLS model. The result of the Hausman test shows the  $\chi^2$  value 11.37 (p-value 0.1231) which indicates that the Random Effect model is more appropriate than the Fixed Effect model. Similarly, the result of the Breusch and Pagan Lagrangian multiplier test shows the  $\chi^2$  value 0.000 (p-value 1.000), which indicates that Pooled OLS method is more appropriate than the Random Effect model. Thus, this paper has estimated the Pooled OLS model to analyze the firm-specific variable's effect on Nepalese commercial banks' stock return.

The cross-sectional multivariate regression model is estimated using the annual returns of an individual bank as the dependent variable and firm-specific variables as the explanatory variables. Table 3 depicts the result of pooled OLS regression analysis.



**Table 3 Pooled OLS Regression Results**

Variables	$\alpha$	Std. Error	t	Sig.	VIF
Constant	37.762	33.359	1.126	0.259	-
ln(ME)	-3.725	3.400	-1.094	0.275	1.306
BE/ME	30.985	21.513	1.491	0.151	3.166
E/P	-456.239	99.267	-4.649	0.000	2.996
D/P	181.820	103.672	1.738	0.081	1.073
EPS	1.519	0.137	11.077	0.000	1.481
ROA	-29.846	12.353	-2.400	0.017	1.017
S/P	-13.938	4.607	-3.024	0.003	1.160
F Statistics	26.91	Breusch-Pagan test for heteroskedasticity			
Adjusted R <sup>2</sup>	0.4740	$\chi^2$	0.27		
Durbin-Watson	1.902	P-value	0.6060		

Source: NEPSE, SEBON, and Annual Reports of Sample Banks (2002/03-2017/18).

Note:  $\alpha$  represents regression coefficients, Std. Error indicates standard errors,  $t$  presents  $t$ -statistics; Sig. indicates a significant level or  $p$ -value. VIF, F-statistics, Durbin Watson (DW) statistics and Adjusted R<sup>2</sup>,  $\chi^2$ , P-value for test for heteroskedasticity are also exhibited in the table.

The result of Table 3 shows the positive coefficients for book-to-market equity (BE/ME), dividend yield (D/P) and earnings per share (EPS) and negative coefficients for equity market capitalization [Ln(ME)], earnings yield (E/P), return on assets (ROA) and sales per share to stock price (S/P) ratio. The slope coefficient of size (lnME) is negative and statistically insignificant. This result implies that there is no significant effect of the size of the firm on Nepalese commercial bank stock return. This finding contradicts with findings of Fama and French (1992) and Chan et al. (1991), who documented the negative impact of size and Surjandari et al. (2020) and Mahfudz and Wijayanto (2020), who demonstrated the positive influence of size on average stock return.

Similarly, the regression result shows an insignificant positive coefficient for BE/ME. This result indicates no significant effect on Nepalese commercial banks' BE/ME stock return. This result contradicts the findings of Stattman (1980), Rosenberg et al. (1985), Fama and French (1992), Davis (1994), Chan and Chui (1996), and Nugroho (2020), who found that BE/ME have a positive influence on stock return.

In addition, the result depicts a significant negative coefficient of E/P and S/P. The slope coefficient of E/P is negative 456.239 with a  $t$ -value of 4.649, and the coefficient of S/P is negative 13.846 with a  $t$ -value of 2.400, respectively. Thus, this paper's results conclude that there is a significant negative influence of E/P and S/P on the stock return of Nepalese commercial banks. The inverse effect of E/P on stock return contradicts the findings of Basu (1977) and Abraham et al. (2017). Likewise, the inverse effect of the S/P ratio on stock return contradicts the findings of Shabib-ul-Hasan, Farooq and Muddassir (2015).

Furthermore, the estimated regression result in Table 3 shows that D/P significantly and positively influences stock returns in Nepalese commercial banks. The slope coefficient of D/P is 181.820 with a  $t$ -value of 1.738, which is significant at a 10 per cent level of significance. Similarly, earnings per share (EPS) shows a positive explanatory power. The positive influence of D/P is compatible with the findings of Zainudin et al. (2018) and contradicts the findings of (Anandasayanan, 2018). The slope coefficient of EPS is 1.519 with a  $t$ -value of 11.077 which is significant at a one per cent significance level. EPS have strong explanatory power in explaining the cross-section stock return of Nepalese commercial banks.

In addition, the estimated regression result demonstrates a significant negative explanatory power of ROA on stock return. The slope coefficient of ROA is negative 29.846 with t-statistics of 2.400, which is significant at a 5 per cent level of significance. It can, therefore, be concluded that there exists a strong negative effect of ROA on stock return in Nepalese commercial banks. The inverse effect of return on assets also contradicts the findings of Anwaar (2016) and Bustani (2020).

Finally, Table 3 shows the value of the adjusted R square is 0.4740. This value indicates that the independent variables can explain the dependent variable (stock return) by 47 per cent in aggregate, and the value of F statistics of 26.91, which is significant at a one per cent level of significance, which implies that the model is the best fit. Similarly, the value of VIF is found to be less than 10 for each explanatory variable, indicating no multicollinearity problem. The  $\chi^2$  value of 0.27 (p-value 0.6060) of Breusch-Pagan test for heteroskedasticity indicates no problem of heteroskedasticity. Finally, the estimated value of DW for the complete models of stock returns is between dU and 4-dU. Thus, there is no problem with autocorrelation.

## Conclusion and Implication

This paper has observed the influence of firm-specific variables on the stock returns of commercial banks. Descriptive and causal research designs have been applied to analyze firm-specific variables' effect on Nepalese commercial banks' stock returns. The findings of this paper confirm that earnings yield, dividend yield, earning per share, return on assets, and sales per share to stock price ratio are the major influencing factors of stock returns in Nepalese commercial banks. The result of this paper reveals that stock return is positively affected by dividend yield and earnings per share and negatively influenced by earnings yield, return on assets and sales per share to stock price ratio. On the other hand, this paper observes no significant influence of firm size, i.e., equity market capitalization and book-to-market equity ratio, on stock returns.

Further, this paper concludes that earnings yield, dividend yield, earnings per share, return on assets and sales per share to stock price ratio strongly explain the stock return of Nepalese commercial banks. The results of this paper also conclude the size of the firm, i.e., equity market capitalization and book-to-market equity of commercial banks, have no role in explaining the stock returns of commercial banks in Nepal. Thus, Nepalese commercial banks can increase common stock return by increasing dividend yield and earnings per share and by lowering earnings yield, return on assets and sales per share to stock price ratio.

This paper also concludes that firm-specific variables are the most influencing factor in explaining Nepalese commercial banks' cross-section of stock returns in Nepal. From a policy perspective, more emphasis is essential on firm-specific variables to maintain the optimal stock returns in Nepalese commercial banks. Similarly, the findings of this paper would be useful to academicians in teaching-learning activities and research in the field of stock returns. The results of the paper would be useful for financial managers of firms as well as stock investors to get different information on stock returns to make effective investment decisions for efficient utilization of various resources for the smooth operation of business activities in Nepalese commercial banks. Finally, the paper's findings would be relevant to policymakers for formulating and implementing sound investment policies and strategies.

## Conflict of Interest

Author(s) declares no conflict of interest while preparing this paper.

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### Appendix I: List of Sample Commercial Banks

S.No.	CODE	Name of the Commercial Bank	Sample Period	No. of Observations
1	ADBL	Agriculture Development Bank Limited	2010/11 to 2017/18	8
2	BOK	Bank of Kathmandu Ltd.	2010/11 to 2017/18	8
3	CZBIL	Citizen Bank International Limited	2008-09 to 2017/18	10

S.No.	CODE	Name of the Commercial Bank	Sample Period	No. of Observations
4	EBL	Everest Bank Ltd.	2006/07 to 2017/18	12
5	HBL	Himalayan Bank Ltd.	2003/04 to 2017/18	15
6	KBL	Kumari Bank Limited	2004/05 to 2017/18	14
7	LBL	Laxmi Bank Limited	2004/05 to 2017/18	14
8	MBL	Machhapuchehhre Bank Ltd.	2003/04 to 2017/18	15
9	NBL	NABIL Bank Ltd.	2002/03 to 2017/18	16
10	NBB	Nepal Bangladesh Bank Limited	2008/09 to 2017/18	10
11	NCCB	Nepal Credit & Com. Bank	2007/08 to 2017/18	11
12	NIBL	Nepal Investment Bank Ltd.	2004/05 to 2017/18	14
13	SBI	Nepal SBI Bank Ltd.	2004/05 to 2017/18	14
14	NMB	NMB Bank Limited	2010/11 to 2017/18	8
15	PCBL	Prime Commercial Bank Limited	2009/10 to 2017/18	8
16	SANIMA	Sanima Bank Limited	2006/07 to 2017/18	12
17	SBL	Siddhartha Bank Limited	2005/06 to 2017/18	13
18	SCBL	Standard Chartered Bank Ltd.	2004/05 to 2017/18	14
<b>Total</b>				<b>217</b>

Source: Annual report of NEPSE (2002/03-2017/18).