

## Stock Price Behavior of Commercial Banks of Nepal

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### Abstract

*The purpose of this research is to examine the behavior of stock price in Nepalese commercial banks. This research uses MPS as dependent variable and experiment variables as EPS, PE Ratio, DY ratio, Size, ROE, BV per share and ROA. The secondary data has been collected from the annual report published by commercial banks for five years' period from 2015/16 to 2019/20. Descriptive and analytical research design is used to analyze and interpret the data using SPSS version 23. Eighteen commercial banks are taken as sample out of 27 population using convenience sampling technique. Multiple linear regression model has been used to show the impact of independent variables on MPS. The result indicates that there is a positive and statistically significant effect of EPS, PE ratio and size of banks on MPS. Other variables have negligible effects.*

**Key Words:** Book value per share, Commercial Banks, EPS, MPS, PE ratio, ROE, Stock behavior

### Introduction

In Nepal, market price per share of commercial banks has been changing rapidly. The investors and companies are facing unstable situation on capital market. During this one-year period (i.e. FY 2077/2078) NEPSE index has risen from 1400 points to 3000 points, it shows that the capital market in Nepal is highly volatile. The current study explores existing constructs on stock price variables for listed Nepalese commercial banks from 2015/16 to 2019/20. The forces of supply and demand in capital market have a direct impact on stock prices. The share prices are influenced by the success of enterprises, industries, and countries. The volume traded in the Nepal stock exchange market is one of the most important factors of stock prices. A measure of the number of shares that change hands for a certain security or the overall number of shares traded is known as volume traded. The interest rate mechanism, as well as the statutory rates that commercial banks must maintain in accordance with Nepal Rastra Bank's rules, have an impact on the price volatility of the banking stock. The asset quality of the organized sector of financial markets, as well as the provision for non-performing assets (NPA), have a significant impact on stock valuation.

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M. C. S. Menike, (2015) argued any country's financial sector plays a critical role in the development of its economy, and the growth of its financial sector is dependent on the growth of its economy. The capital market is a crucial participant in the financial industry, as it provides an outlet for users and providers of financial resources to invest.

Investopedia (2019) explained the stock is a sort of security that represents proportionate ownership in the issuing corporation, according to the definition. The investor is entitled to that percentage of the corporation's assets and earnings. Stocks are divided into two categories: ordinary and preferred shares. The owner of common stock is normally entitled to vote at shareholder meetings and receive dividends. Although preferred stock does not have voting rights, it has a greater claim on assets and earnings than common stock. (Arkan,2016).

Raza et al., (2021) explained stock market performance is considered as the most important area of financial research by investors, managers, financial analysts and government. The stock market is vital to sustain the economic growth as it assists the fund movements among the government, investors and other stakeholders. This research aims to determine the impact of book value per share, EPS, MPS, PE ratio, and ROE on market price per share in Nepalese commercial banks.

The purpose of this study is to determine the major factors that influence the stock price of Nepalese commercial banks from 2016 to 2020. The objectives of this research is to explore at the primary elements that influence the stock price of commercial banks in Nepal during a five-year period. Even if the study results differ significantly depending on the sample and data used, it can reveal some common elements that influence stock price, such as bank size, return on equity, earnings per share, dividend yield, book value per share, and so on.

There are six sections of the study. The review of literature is presented in section II., section III explains the conceptual framework, and section IV describes the study's research methods. The empirical data and discussion are presented in section V. Finally, section VI presents the study's conclusion.

### **Empirical Review**

Moffett & Naserbakht, (2013) analyzed Mergers and Acquisitions (M&As) in the banking industry in the United States have a financial impact. This research focused on M&As in the banking business in the United States, examining the stock price behavior of targets and acquirers based on M&A announcements from 2000 to 2010 in a sample of 154 deals. The study assumed that no additional unusual occurrences occurred throughout the estimation period (-60, +60) and hence concentrated on the actual return rather than the abnormal return. In future studies, it was suggested that the abnormal return be used instead of the

actual return to negate price swings caused by causes other than the specific announcement under consideration. According to the findings, M&A announcements resulted in positive average real returns of (-60, +60) for both target and acquirer banks in all situations. The average actual return of acquirers' shareholders in M&A announcements of all-cash offers was higher than the average actual return of targets' shareholders in M&A announcements of all-cash offers, but the average actual return of targets' shareholders in M&A announcements of all-cash offers was lower than the average actual return of all cash-stock offers.

Om & Goel, (2017) studied on the a share of profit taken from the company's corporate profits after the money has been set aside for future investment (retained earnings). The dividend policy was impacted by both external and internal influences. The company's dividend policy was linked to its profitability situation. The study was carried out in order to investigate the impact of several determinants on the market price of a share in the setting of the Indian economy. Return on Equity, Dividend Per Share, Earning Per Share, Dividend Payout Ratio, Debt Equity Ratio, Total Asset Turnover Ratio, and Dividend Yield were all examined to discover how they influenced Market Price Per Share. After examining the Market Price Per Share outcome, changes to the dividend policy may be made. The data from 2011-12 to 2015-16 was evaluated using statistical tools for the purposes of this study. The concepts of correlation, multicollinearity and regression analysis were examined in this study. The research was limited to the time period of 5 years and only 31 companies had been considered.

Rosikah et al, (2018) investigated on return on asset, return on equity, and earnings per share have different effects on the value of a company. The goal of the study was to determine and assess the impact of return on assets on firm value, the impact of return on equity on firm value, the impact of earning per share on firm value, and the impact of ROA, ROE, and EPS on firm value all at the same time. The study included 114 firms that were listed on the Indonesia Stock Exchange (BEI) between 2006 and 2010. While the sample selection was done using the purposive sampling method with the goal of getting representative samples in line with given criteria, the amount of the final sample contained complete data in this study were of 32 organizations. Multiple regression analysis was used to analyze the effect of independent factors such as ROA, ROE, and the EPS indication of the firm's value with Tobin's Q on primary data. Return on asset had a positive and significant effect on company value, return on equity had a statistically positive but not significant effect on firm value, and earnings per share had a negative effect on firm value and not significant effect on firm value, return on assets, return on equity, earnings per share were simultaneous significant effect on stock price.

Chowdhary et al., (2019) investigated the impact of some selected characteristics on the movement of the financial sector's share price in Bangladesh, such as dividend, Price Earnings Ratio (P/E), Net Asset Value (NAV), Earnings per Share (EPS), Dividend Payout Ratio, and size. Banks and non-bank financial institutions made up the financial sector. 30 banks and 18 non-bank financial entities listed on Bangladesh's Dhaka Stock Exchange (DSE) were included in the sample. From 2011 to 2015, secondary data was collected from these businesses. SPSS 20 was utilized to do multiple regression analysis in this investigation. The data revealed that the impact of the variables differs depending on the company. Dividends, P/E, NAV, EPS, Dividend Payout Ratio, and size were among the major factors that had a substantial impact on stock prices in Bangladesh's banking industry. Non-bank financial institutions, on the other hand, were only affected by dividends, P/E, DPR, and NAV.

Badruzaman, (2020) conducted an investigation on the Nikkei 225 Index of issuers on the Japan Stock Exchange in 2018 to estimate the effect of Earnings Per Share and Return on Equity on Stock Prices. In this study, there were 57 different issuers. The information used was from the 2018 financial report. According to the results of data processing with the SPSS version 25 program, Earnings Per Share and Return on Equity have a 67.3 percent impact on Stock Prices, with Earnings Per Share having a somewhat positive impact. Return on Equity also had a detrimental impact on stock prices. When these two variables were evaluated, EPS had the greatest and most significant impact on stock prices, while return on equity had the opposite effect.

Raza et al., (2021) studied on the impact of micro and macro factors on share prices, especially non-financial enterprises listed on the Pakistan Stock Exchange in the textile sector (PSX). The study used secondary sources such as Data Stream, annual reports, SBP, and other databases to acquire data from 62 publicly traded textile companies (PSX). From 2009 to 2017, the study used panel data analysis to examine the impact on share price. To conduct the analysis, various statistical analysis methods were used, including descriptive statistics, correlation matrix, pooled OLS, Breusch and Pagan LM test, Hausman test, and fixed effect model. Micro dynamics (EPS, BVS, and LNFS) and macro dynamics (GDP) were found to be positively and significantly connected to firm share price in Pakistan's textile sector. Micro (DPS) and macro (INF) dynamics, on the other hand, were determined to be unimportant. The research contributes to the body of knowledge and current debate about the factors that influence share price in developing markets, particularly in Pakistan's textile sector.

The main research issue on this study is: Does firm specific variables effects on stock price of commercial banks in Nepal? For this study purpose following research methodology has been applied.

### Research Methodology

This research is based on descriptive and analytical research design. Industries specific variables; book value per share, dividend yield ratio, earnings per share, price earnings ratio, return on equity and size of banks are taken as independent variables and market per share as outcome variable. Study is based on secondary data from the 18 commercial banks for 2015/16 to 2019/20. Convenience sampling technique has been used to select the sample banks. Data are collected from the published annual reports and data bank of SEBON. Data are analyzed and interpreted by descriptive and inferential statistics like, correlation and multiple regression using SPSS software version 23.

### The Model

The econometric model proposed for the study is expressed as:

$$y = \alpha + \beta x + \varepsilon$$

Where:

y is the outcome variable;  $\alpha$  is constant;  $\beta$  is the explanatory variable coefficient; x is the explanatory variable vector; and  $\varepsilon$  is the error term (assumed to have zero mean and independent across the time period). The regression model can be specified as:

$$MPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 PE_{it} + \beta_3 DY_{it} + \beta_4 Size_{it} + \beta_5 ROE_{it} + \beta_6 BV_{it} + \beta_7 ROA_{it} + \varepsilon_{it}$$

Where,

$MPS_{it}$  = Market price per share for the bank during t period.

$EPS_{it}$  = Earnings per share for the bank during t period.

$PE_{it}$  = Price earnings ratio for the bank during t period.

$DY_{it}$  = Dividend yield ratio for the bank during t period.

$Size_{it}$  = Size for the bank during t period.

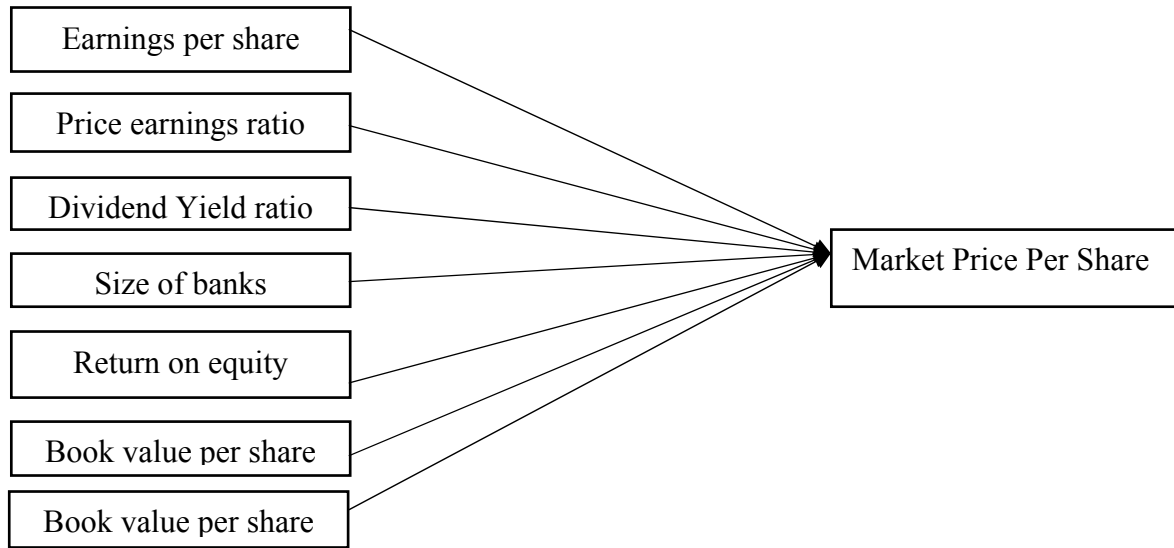
$ROE_{it}$  = Return on Equity for the bank during t period.       $\varepsilon_{it}$  = Error terms

$BV_{it}$  = Book value per share for the bank during t period.       $\beta_0$  = Intercept

$ROA_{it}$  = Return on Assets for the bank during t period.       $\beta_1 - \beta_6$  = Coefficient parameters

**Research Framework**

Following research framework has been used in the study:



**Figure 1. Research framework.**

**Results and Discussion**

**Descriptive Statistics**

Descriptive statistics of the variables used in the study of commercial banks in Nepal from 2015/16 to 2019/20 has been presented in table 1. The statistics includes values of mean, standard deviation, minimum and maximum values.

**Table 1.**

*Descriptive Statistics of Variables*

	MPS	EPS	PE ratio	DY Ratio	Size	ROE	BV/share	ROA
Mean	569.15	25.44	21.08	17.76	25.29	14.61	179.60	1.72
S.D.	590.58	9.71	13.59	15.16	0.51	5.71	60.56	0.47
Min.	158.00	8.04	5.68	13.58	22.98	4.42	103.58	0.71
Max.	3600.00	52.79	83.94	105.26	26.04	44.60	396.92	2.79

Note: Annual Report

Table 1. shows that Minimum value of MPS is 158, Maximum value is 3600, mean value is 569.15 and S.D. value is 590.58, it shows that MPS of banks in Nepalese context rapidly increase until maximum value 3600. It describes that in Nepalese capital market is highly volatile. In regard, minimum value of EPS is 8.04, maximum value is 52.79, mean and S.D. value are 25.44 and 9.71 respectively. Likewise, PE ratio of the bank minimum value is 5.68, maximum value is 83.94 with an average value 21.08. Dividend yield ratios of Nepalese commercial banks' minimum value is 13.58, maximum value is 105.26 percent with mean value 17.76 percent. Similarly, size of banks having minimum value is 22.98; maximum value is 26.04. This shows that the size of Nepalese banks is not that much differences. Meanwhile, mean value is 25.29 and S.D. is 0.51. In terms of ROE, minimum value is 4.42, maximum value is 44.60, mean value is 14.61 and S.D. is 5.71. Moreover, minimum value of book value per share is 103.58, maximum value is 396.92, S.D. is 60.56 and mean value is 179.60. minimum value of ROA is 0.71, maximum value is 2.71 and mean and S. D. values are 1.72 and 0.47 respectively. This finding supports the finding of (Ahmed, 2018). (Ahmed, 2018)

### Correlation Matrix

Correlation matrix is employed to check the relation between the variables under study. Table 2. Shows the Pearson's correlation coefficients among market price per share, earnings per share, price earnings ratio, dividend yield ratio, size of bank, return on equity, book value per share and return on assets.

**Table 2.**

*Correlation Coefficient between the Variables.*

Variables	MPS	EPS	PE Ratio	DY	Size	ROE	BV/Share	ROA
MPS	1							
EPS	0.545	1						
PE Ratio	0.925	0.253	1					
DY	0.694	0.312	0.699	1				
Size	-0.109	0.050	-0.196	-0.07	1			
ROE	0.249	0.598	0.079	0.08	-0.159	1		
BV/Share	0.509	0.660	0.336	0.42	0.333	-0.024	1	
ROA	0.194	0.684	-0.032	0.10	0.011	0.618	0.320	1

Note: Annual Reports

Table 2. explains price earnings ratios has positive relation on market price per share which means that increase in PE ratio results into increase in share price in market. This result is consistent with the study of Arslan & Zaman, (2014). However, size of bank has negative relation on market price per share. Dividend yield ratios and book value per share have positive correlation respectively, which means increase in dividend yield and book value per share helps to increase in market price per share of commercial banks of Nepal. The result is similar with the study of Balakrishnan, (2016) & Ahmad et al., (2021) and contradict with the result of Nalurita, (2019).

### Regression Analysis

**Table 3.**

#### *Regression Coefficient of Dependent and Independent Variables.*

Variables	Unstandardized		T	Sig.	Collinearity Statistics	
	B	Se			Tolerance	VIF
Constant	-2129.521	780.843	-2.727	.008	-	-
EPS	23.239	3.453	6.731	.000	.165	6.061
PE Ratio	37.171	1.513	24.576	.000	.439	2.277
DY Ratio	.183	1.315	.139	.890	.467	2.142
Size	58.109	31.265	1.859	.057	.727	1.375
ROE	-4.210	4.406	-.955	.343	.293	3.410
BV/share	-.491	.481	-1.021	.311	.219	4.567
ROA	.419	44.203	.009	.992	.422	2.367
<b>R<sup>2</sup> = 0.962 ,Adj. R<sup>2</sup> = 0.958,F. Statistics = 258.309, F. Sig. = 0.000,D.W. = 1.53</b>						

Dependent Variable: MPS

In table 3. Regression coefficient of dependent and independent variables has been shown. The table shows adjusted R<sup>2</sup> of the variables is 0.958, which means the selected independent variables (EPS, PE ratio, DY ratio, size of bank, ROE, BV/share and ROA) explains MPS by 95.8%, rest 4.2% explains by other variables. Likewise, F. Sig. is 0.000, it means the overall model is significant for the study and it can use the OLS to test the variables and Darwin Watson value 1.53 means there is a positive auto-correlation between the variables. Variance inflation factors of all variables ranges from 1.375 to 6.061, therefore there in no multicollinearity. It means that there is no correlation between the independent variables and



changes in one independent variable do not change the value of another independent variable.

Earnings Per Share and Price Earnings Ratio has positive and statistically significant effect on Market Price Per Shares of commercial banks in Nepal at 1% level of significance. It means one-unit increase in EPS and PE ratio causes 23.239 and 37.171 units increase in market price per shares of commercial banks in Nepal. This result is consistent with Arshad et al., (2015). However, return on Equity and Book Value Per Share is negative and insignificant impact with market price. The table also shows that size of the banks has positive and significant effects on market price per share at 5% level of significance which is consistent with the result of Ahmed, (2018). On the other hand, DY Ration and ROA has positive but not significant. Similarly, ROE and BV per share has negative but not significant effect on MPS.

## Conclusion

Several research on stock behavior in Nepalese commercial banks have been undertaken. The purpose of this study is to determine the impact of EPS, PE ratio, DY, Size ROE, and ROA on MPS. In Nepal, there are substantial evidences that investors make stock purchase decision after examining various company performances. As per descriptive and inferential statistics, EPS, PE ratio, and bank size have a significant and favorable effect on the market price of a share. The market price is influenced by DY and ROA in a positive but insignificant way. The effects of ROE and book value per share are negative and negligible. The results of this study support the hypothesis that earnings per share, price earning ratio and size of banks have positive and significant effect on market price per share of commercial banks during the period of 2015/16 to 2019/20.

The focus of this research is solely on the stock price behavior of commercial banks. Using the same independent and dependent variables, future researchers can investigate the stock price behavior of development banks, insurance companies, other financial institutions and manufacturing firms listed in the Nepal Stock Exchange.

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