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Firm-Specific Determinants of Stock Market Price of Nepalese Enterprises

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Abstract

This paper aims to identify the firm-specific determinants of stock market price of Nepalese enterprises. For this purpose, this paper has used the unbalanced panel data of 47 firms listed in NEPSE for the period of 1994 to 2019. Breusch and Pagan Lagrangian multiplier test and Hausman test is used to select appropriate regression model. Both tests concluded that Fixed Effect model is appropriate for the given set of data. The result reveals that firm-specific factors play significant role to determine market price per share of Nepalese enterprises. Further, the result concludes that there is a significant positive influence of firm size [Ln (ME)], dividend per share (DPS) and earnings per share (EPS), and negative influence of return on equity (ROE), and dividend yield (DY) on market price per share of Nepalese enterprises. Similarly, an insignificant positive influence of book value per share (BVPS) and an insignificant negative of influence return on assets (ROA) on market price of share are observed.

"Key words": firm-specific factors; market price per share; panel data analysis.

1. Introduction

Public limited firms can collect more funds from capital market by issuing securities through initial public offering (IPO). The securities which are sold in primary market are traded in secondary market. In other words, secondary market provides the trading floor to the investor to buy and sell the securities of any firm listed on the stock exchange. Stock exchange plays a significant role for the economic growth by providing opportunities to the investors to liquidate their holdings and by providing opportunities for investing in the desired stocks. The stock market plays an essential role in the growth of the industry and commerce of the country (Geetha & Swaaminathan, 2015). In stock exchange large number of investors participate actively for trading the stocks of the firm and the stocks are traded on agreed price of buyer and seller which varies for each transaction. A rational investor considers so many firm-specific and macroeconomic factors for accepting the

trading price of securities. In other words, there is a significant influence of firm-specific fundamental factors such as firm size, earnings, dividend, cash flow, return on equity, return on assets, leverage etc. and macroeconomic factors such as interest rate, inflation, economic growth, gold price, trade balance, exchange rate etc. on market price of stock, thus the rational investor considers all these factors for trading stocks. Empirical evidences of Mehta and Turan (2005), Sharif, Purohit and Pillai (2015), Om and Goel (2017), and Geetha and Swaaminathan (2015) also documented that the market price of stock is affected by firm-specific as well as macroeconomic factors.

Mukherjee and Naka (1995) found positive relation of exchange rate, money supply, and industrial production with stock price of Tokyo Stock Exchange. Zhao (1999) and Udegbunam and Eriki (2001) revealed that inflation has a significant negative influence on the behavior of the stock prices. Likewise, Joshep and Vezos (2006) showed that economic activities such as GDP, interest rate, money stock, and financial deregulation also drive the stock prices. On the other hand, financial ratios can be used as the predictor of stock price (Husain & Mahmood, 2001). Mehta and Turan (2005) identified market capitalization, market price to book value ratio and price-earnings ratio as the determinants of stock price. Likewise, Zulkarnaen, Syamsun, and Maulana (2016) stated that return on assets plays significant role to explain variation in stock prices. Similarly, Haque and Faruquee (2013) also concluded that the market price of pharmaceutical companies listed in Dhaka Stock Exchange is very sensitive toward fundamentals of companies such as earnings per share, dividend per share, return on equity, return on assets, and fixed assets to total assets ratio. Hutabarat and Flora (2015) also revealed that financial ratios significantly affect the stock price. On the other hand, Sharif, Purohit and Pillai (2015) pointed out that return on equity, book value per share, dividend per share, dividend yield, price earnings ratio, and firm size are the most influencing firm-specific factors for determining the share price of Bahrain market.

The impact of internal and external factors such as price earnings ratio, stock price rumor, demand for the share, changes in government policies, and economic conditions are the major determinants of share price of the stock listed in Dhaka Stock Exchange (Mondal & Imran, 2010). Further, they also concluded that 65 percent of the variation in the stock price is explained by leverage, cash flow, growth, dividend, market capitalization and leverage. Likewise, Al-Tamimi, Alwan and Rahman (2011) evaluated the internal and external factors determining the stock price of UAE stock market for the period of 1990 to 2005. Using the data of 17 firms, the study found a significant positive impact of earnings per share and significant negative impact of consumer price index on the stock price. On the other hand, the study found insignificant positive coefficient of GDP and insignificant negative coefficient of interest rate. Furthermore, Tandon and Malhotra (2013) scrutinized the factors affecting stock price of National Stock Exchange (NSE) for the period of 2007 to 2012. Using the linear regression analysis the study found a significant positive impact of price earnings ratio, book value and earnings per share and significant negative impact of dividend on stock price.

In the context of Jordan stock market, the effect of return on asset (ROA), return on equity (ROE), debt ratio, the age of the company, and the size of the company on stock market price was analyzed by Al Qaisi, Tahtamouni and Al-Qudah (2016). The study selected twenty insurance companies listed in Amman Stock Exchange from 2011 to 2015. Using the multiple regression analysis they found significant effect of ROA, debt ratio, the age of the company and size of the company on stock market price whereas they found no effect of ROE on stock market price. Likewise, return on equity, dividend per share, earnings per share, dividend payout

ratio, debt equity ratio, total assets turnover ratio and dividend yield has been found as the major determinants of market price of the share in the context of Indian economy for the period of 2011 to 2016 (Om & Goel, 2017).

In the context of Indonesian stock market, Bratamanggala (2018) found earnings per share, price to book value and return on assets as the major determinants of stock prices. Likewise, Geetha and Swaaminathan (2015) analyzed the factors influencing firm's market price of automobile and IT industries of India. Using the four automobile industries (Tata motors, Maruthi, Hero Honda, and Mahindra and Mahindra) and four IT industries (Infosys, Tata consultancy Services, Wipro Technologies, and Oracle Financial Services) listed in BSE and NSE for the period of 2010 to 2014, the study found a significant influence of EPS, book value, price earnings ratio and dividend yield on the stock price movements in the market. From the perspective of investor, Mubarak and Elsheikh (2017) analyzed the factors affecting stock price in Saudi Stock Market. Using the questionnaire survey in Najran City, the study revealed that accounting information is the most affecting factor affecting stock price followed by self-image/firm-image coincidence, personal financial needs, advocate recommendation, and neutral Information.

Subing and Kusumah (2017) also analyzed the impact of internal and external factors determining stock price of Indonesian stock market for the period of 2008 to 2015. The study used price earnings ratio, return on assets, and systematic risk as the internal factors and inflation, interest rates, and oil prices as the external factors. Using the panel regression analysis the study found a significant positive impact of price earnings ratio, return on assets, and oil prices and a significant negative impact of inflation on stock price. On the other hand, systematic risk and interest rate showed no significant impact on stock price.

In the context of Nepal, Karki (2018) analyzed the factors determining stock prices of Nepalese commercial banks. Karki (2018) used firm specific variables such as earnings per share, book value per share, cash dividend per share, stock dividend per share, price earnings ratio, and firm size for the period of 2000 to 2014 as explanatory variables. The study found earnings per share and dividend per share as the most influencing factors for determining the stock price of Nepalese commercial banks. Similarly, Ghimire and Mishra (2018) scrutinized the determinants of stock market price of Nepalese enterprises. They used 11 financial and non-financial firms as sample for the period of 2012 to 2017. Using the simple and multiple regression analysis Ghimire and Mishra (2018) found market to book value and price earnings ratio are the major significant factor determining stock price of Nepalese enterprises. Similarly, they found significant positive impact of dividend per share and book value on stock price. Thus, this paper aims to analyze the influence of firm-specific factors on market price of share in Nepalese context. However, various firm-specific variables influence the market price per share, this paper has confined with the firm size measured by equity market capitalization (ME), return on assets (ROA), return on equity (ROE), divided per share (DPS), dividend yield (DY), book value per share (BVPS) and earnings per share (EPS) only as the firm-specific variables.

The rest of the paper is organized as follows: Section 2 describes the methodology of the study. Result and discussion are presented in Section 3. Finally, summary and conclusion are presented in Section 4.

2. Methodology

Research design

The primary aim of this paper is to analyze the impact of firm-specific factors on market price of common stocks listed in NEPSE. To achieve the aim, this paper has used descriptive and causal comparative research design. The behavior and fact of the dependent variable, i.e., market price per share and independent variables, i.e., firm specific variables are observed through the descriptive research design and the influence of independent variables on dependent variable is assessed through causal comparative research design.

Population and sample

The entire companies listed in Nepal Stock Exchange (NEPSE) till mid-July 2019 are the population of this study. All together there are 217 companies listed in NEPSE till mid-July 2019. Out of these 217 companies 47 companies are selected as sample on the availability of data. Thus, this study is confined with 47 companies listed on NEPSE.

Nature and sources of data

This study is solely based on the secondary source of data of listed companies in NEPSE till mid-July 2019. This paper has used unbalanced panel data from 2000/01 to 2018/19. The annual reports of sample companies are used to collect the required data for the study.

Model specification

In this paper market price per share is used as dependent variable and firm-specific variables such as firm size, return on assets, return on equity, dividend per shares, dividend yield, book value per share and earnings per share are used as explanatory variable. The influence of firm-specific variables on market price per share of Nepalese enterprises is analyzed using the following multivariate regression model.

$$MPS_{it} = \beta_0 + \beta_1 Ln(ME)_{it} + \beta_2 ROA_{it} + \beta_3 ROE_{it} + \beta_4 DPS_{it} + \beta_5 DY_{it} + \beta_6 BVPS_{it} + \beta_7 EPS_{it} + \varepsilon_{it}$$

Where, MPS_{it} is the market price per share of firm i for year t. β_i is the coefficient of independent variable to be estimated. Ln $(ME)_{it}$ is the natural logarithm of size of the firm i for year t, which is calculated by multiplying number of share outstanding by closing price per share at year t. ROA_{it} is the return on assets of firm i for year t, which is obtained as net income divided by total assets. ROE_{it} is the return on equity of firm i for year t, which is calculated by dividing net income available to common stockholder by shareholders' equity. DPS_{it} is the dividend per share of firm i for year t, which is calculated by dividend paid by number of share outstanding. DY_{it} is the dividend yield of firm i for year t, which is calculated by dividend per share by market price per share. $BVPS_{it}$ is the book value per share of firm i for year t, which is calculated by dividing shareholders equity by number of share outstanding. EPS_{it} is the earnings per share of firm i for year t, which is calculated by dividing net income available to common stockholder by number of share outstanding and ϵ_{it} is the residual error term.

3. Results and discussion

This section presents the result obtained from the analysis of data. The result of descriptive analysis is presented at first followed by correlation analysis and regression analysis.

Descriptive statistics

The result of descriptive statistics of variables under the study is presented in Table 1.

Table 1

Descriptive Statistics

	Mean	Std. Deviation	Minimum	Maximum	N
MPS in Rs	731.44	827.3622	71	6830	651
Size (Rs in millions)	13505.84	43409.11	282.2	998187.2	651
ROA (in %)	4.11	6.84	-40.44	59.49	651
ROE (in %)	16.36	13.52	-114.67	193.35	651
DPS (in Rs)	25.73	35.15	0	270	651
DY (in %)	4.25	4.45	0	29.79	651
BVPS (in Rs)	180.31	84.52	-364	664.4	651
EPS (in Rs)	32.47	28.73	-86	175.84	651

As depicted in Table 1 the firm with wide range of market price per share has been included in the sample. It ranges from minimum value of Rs 71 to maximum value of Rs 6830 with average value of Rs 731.44. Similarly, sample firms vary widely in term of their market capitalization, i.e., size. It ranges from minimum value of Rs 282.2 million to maximum of Rs 998187.2 million with average value of Rs 13505.84 million. Furthermore, return on assets (ROA) and return on equity (ROE) showed the mean value of 4.11 percent and 16.36 percent respectively. Likewise, dividend per share (DPS) and dividend yield (DY) showed average value of Rs 25.73 and 4.25 percent respectively. Finally, book value per share (BVPS) and earnings per share (EPS) showed average value of Rs 180.31 and Rs 32.47 respectively.

Correlation analysis

To identify the relationship among the variables under the study correlation has been calculated. Table 2 shows the result of correlation analysis. As evident from Table 2 there is a positive relation between market price per share and firm size, return on assets, return on equity, dividend per share, book value per share and earnings per share whereas there is negative relation between market price per share and dividend yield. Likewise, Table 2 shows the highest correlation of 0.7102 between return on equity and earnings per share and the lowest correlation of -0.1449 between market price per share and dividend yield.

 Table 2

 Result of Correlation Analysis

	MPS	ME	ROA	ROE	DPS	DY	BVPS	EPS
MPS	1.0000							
ME	0.1850	1.0000						
ROA	0.0211	0.0086	1.0000					
ROE	0.2772	0.0504	0.3876	1.0000				
DPS	0.6102	0.1549	-0.0043	0.4147	1.0000			
DY	-0.1449	0.0383	-0.0332	0.1612	0.4197	1.0000		
BVPS	0.0291	0.0179	0.0247	-0.0149	0.0929	0.1333	1.0000	
EPS	0.5459	0.1443	0.3959	0.7102	0.7570	0.2054	0.1091	1.0000

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Identification of the appropriate model

This paper aims to identify the impact of firm-specific variables on stock market price by using multivariate regression model. Since, this paper is based on the unbalance panel data, appropriate multivariate regression model is selected based on the result of Breusch and Pagan Lagrangian multiplier test and Hausman test. Breusch and Pagan Lagrangian multiplier test for random effects is applied to identify whether the data are fit for Pooled or Panel model and Hausman test to identify whether the data are fit for Fixed Effect model or Random Effect model. The result of Breusch and Pagan Lagrangian multiplier test and result of Hausman test is presented in Table 3 and 4 respectively. Breusch and Pagan Lagrangian multiplier test shows the chibar² value of 35.24 (p=0.000<0.01). Since the value of chibar² is significant at 1 percent level of significance, it rejects the null hypothesis that the Pooled OLS model is appropriate. Similarly, the result of Hausman test presented in Table 4 shows the chi² value of 73.42 (p=0.000<0.01). Since, the value of chi² is significant at 1 percent level of significance, it rejects the null hypothesis that Random Effect model is appropriate and accepts the alternative hypothesis that Fixed Effect model is appropriate. Thus, this study uses the Fixed Effect model to analyze the influence of firm-specific factors on market price per share of Nepalese enterprises. The result of Fixed Effect model is presented in Table 5.

 Table 3

 Result of Breusch and Pagan Lagrangian multiplier test for random effects

	Var	sd = sqrt(Var)
MPS	684528.2	827.3622
E	219116.9	468.0992
U	20376.88	142.7476
Test: $Var(u) = 0$	$chibar^2(01) = 35.24$	$Prob > chibar^2 = 0.0000$

Table 4Result of Hausman Test

	(b)Fixed Effect	(B)Random Effect	(b-B) Difference	sqrt(diag(V_b-V_B))
Ln (ME)	203.0888	132.0351	71.0537	9.2292
ROA	-7.3432	-0.9326	-6.4106	2.2383
ROE	-5.6764	-3.5552	-2.1212	0.7441
DPS	11.1993	13.6371	-2.4377	0.6973
DY	-67.5593	-75.8849	8.3256	2.1972
BVPS	.0197	0.0236	-0.0039	-

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EPS 7.7882 3.8767 3.9115 0.8365 $\chi^2(7) = 73.42$ $Prob > \chi^2 = 0.0000$

Model estimation

The result of multivariate regression analysis using Fixed Effect model is presented in Table 5. The result reveals that there is a significant influence of firm-specific variables such as firm size [Ln (ME), return on equity (ROE), dividend per share (DPS), dividend yield (DY), and earnings per share (EPS) on market price per share of Nepalese enterprises. The result depicts that there is a significant positive influence of Ln (ME), DPS, and EPS on market price per share of Nepalese enterprises whereas there is a significant negative impact of ROE and DY on market price per share. On the other hand, there is an insignificant negative impact of return on assets (ROA) and book value per share (BVPS) has an insignificant positive impact on market price per share on Nepalese context.

Table 5 Result of Regression Analysis

Variable	Coefficient	Std. Error	t-statistics	p-value
Ln (ME)	203.0888	15.5777	13.04	0.000
ROA	-7.3432	4.6597	-1.58	0.116
ROE	-5.6764	2.4038	-2.36	0.019
DPS	11.1993	1.4808	7.56	0.000
DY	-67.5593	5.9250	-11.40	0.000
BVPS	0.0197	0.0292	0.68	0.500
EPS	7.7882	2.0023	3.89	0.000
Cons.	-1018.1490	130.9748	-7.77	0.000
R^2 : overall = 0.5826	8	F(7,597) = 75.11	Pro	ob > F = 0.0000
F test that all ui=0:		F(46, 597) = 3.82	Pr	cob > F = 0.0000

The beta coefficient of Ln (ME) is found to be 203.0888 with t-value of 13.04 (p=0.000 < 0.01) which indicates that firm size has significant positive influence on market price per share of Nepalese enterprises which reveals that larger firm would have higher market price per share. Likewise, DPS shows the beta coefficient of 11.1993 with t-value of 7.56 (p=0.000<0.01) which reveals that as the dividend per share increases market price per share of Nepalese enterprises also increases. Similarly, the beta coefficient of EPS is observed to be 7.7882 with t-value of 3.89 (p=0.000<0.01) which indicates that higher the earnings per share higher would be the market price per share of Nepalese stock market.

On the other hand, the beta coefficient of ROE is found to be -5.6764 with t-value of -2.36 (p=0.019<0.05) which reveals that as the return on equity decreases the market price per share of Nepalese enterprises increases. Furthermore, DY shows the beta coefficient of -67.5593 with t-value of -11.40 (p=0.000<0.01) which indicates that lower the dividend yield higher would be the market price per share of Nepalese enterprises.

Finally, ROA shows the beta coefficient of -7.3432 with t-value of -1.58 (p=0.116>0.05) and BVPS shows the beta coefficient of 0.0197 with t-value of 0.68 (p=0.500>0.05) which reveals that these two firmspecific variables have no significance influence on the variation on market price per share of Nepalese enterprises.

4. Summary and conclusion

This paper has analyzed the firm-specific determinants of market price per share of Nepalese enterprises. Selected firm-specific factors such as firm size, return on assets, return on equity, dividend per share, dividend yield, book value per share, and earnings per share are used as explanatory variables. For this purpose, this paper has used 47 firm listed in NEPSE for the period of 1993/94 to 2018/19 on the availability of the data. Using the Breusch and Pagan Lagrangian multiplier test for Pooped Regression model or Random Effect model and Hausman test for Random Effect model or Fixed Effect model it is concluded that Fixed Effect model is appropriate for the given set of data.

This paper also verified the significant role of firm-specific variables such as firm size [Ln(ME), return on equity (ROE), dividend per share (DPS), dividend yield (DY), and earnings per share (EPS) etc. to explain variation on market price per share of Nepalese enterprises. Further, the result indicates the significant positive influence of Ln (ME), DPS, and EPS, and the significant negative impact of ROE and DY on market price per share of Nepalese enterprises. Similarly, an insignificant negative impact of return on assets (ROA) and an insignificant positive impact of book value per share (BVPS) on market price per share on Nepalese context is also observed. The positive influence DPS and EPS is compactable with the finding of Al-Tamimi, Alwan and Rahman (2011) and Tandon and Malhotra (2013) whereas insignificant positive impact of book value per share (BVPS) contradicts with the findings of Tandon and Malhotra (2013) and insignificant negative impact of return on assets (ROA) contradicts with the findings of Subing and Kusumah (2017).

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