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Original Article

Firm-specific determinants of Stock Price - the Case of the finance companies listed in Nepal Stock Exchange

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Abstract *- This study attempts to examine the determinants of the share price of finance companies listed on the Nepal Stock Exchange Limited over the period of 2009 to 2018. Data were sourced from the annual reports of the sampled banks and analyzed using the regression model. The results revealed that earning per share and price-earnings ratios and size of the company have a significant positive association with share price while dividend yield, debt ratio, and dividend payout ratio showed the significant inverse association with the share price. The major conclusion of the study is that size of the company, earning per share and price-earnings ratio are the most influencing factors in determining share price in Nepalese finance companies.*

Keywords *- Share price, Dividend payout ratio, Dividend yield, Earnings per share, Price-earnings ratio, Size, Determinants, Finance companies*

I. INTRODUCTION

Among the sources of capital, equity share is one main source of finance for any firm. A stock market where the shares of the company are trading is the primary place for institutions to deploy stocks and increase funds. So, the market is the common factor where the buyers and sellers of these stocks so that institutions that are listed offer their shares. It could be said that the stock exchange has a primary function by supporting the economic growth of the country in the fields of industry and commerce. The market is the main cause for the development of industry and commerce as it plays an important role in developing the industrial sector of the country.

Yes, returns from such equity investments are however subject to vary, depending upon the performance of the particular stock and movement in stock price. Fluctuation in stock prices may occur due to the supply and demand forces but there is no foolproof or perfect system that indicates the exact movement of stock prices. (Bhattarai, 2014).

The present study deals with an attempt to analyze the determinants of the share price of finance companies on the basis of financial statements information in the Nepalese context. The objective of this study is to examine the impact of the internal factor on the stock prices of Nepalese finance companies which are listed on NEPSE. Firm specific factors like dividend payout ratio, dividend yield, earning per share, price-earnings ratio, debt ratio, return on equity, return on assets, and size of the company have been taken to examine whether these variables do affect or not the market share of stock of finance company listed in Nepal Stock Exchange.

II. LITERATURE REVIEW

A good number of empirical studies have been conducted to find out the determinants of stock prices in different countries. Different studies carried over different time periods across different markets have given varying results. Some recent studies related to the determinants of stock prices have been reviewed here.

The study of Nirmala, Sanju, and Ramachandran (2011) identified the determinants of share prices in the Indian market. The study used panel data pertaining to three sectors viz., auto, healthcare, and public sector undertakings over the period 2000-2009 and employs the fully modified ordinary least squares method. They found that dividend, price-earnings ratio, and leverage are significant determinants of share prices for all the sectors under consideration. Further, profitability was found to influence share prices only in the case of the auto sector.

Malhotra &Kamini (2013) used multiple regression analysis to determine the factors that influence stock prices in the context of National Stock Exchange (NSE) 100 companies. A sample of 95 companies was selected for the period 2007-12. Book value, dividend yield, earning per share dividend per share, dividend cover and price-earnings ratio are the variables that had been used to determine the share price. And, firms' book value, earning per share and the price-earnings ratio is having a significant positive association with a firm's

stock price while dividend yield is having a significant inverse association with the market price of the firm's stock.

The study of Alumni (2014) attempted to identify the quantitative factors that influence share prices for the listed banks in Amman Stock Exchange over the period 2005-2011 using a linear multiple regression model. There is a significant positive relationship between EPS and the MP of the listed banks in Jordan. Moreover, moreover, there is a significant relationship between the bank's BV and MP. Another empirical finding from the regression analysis shows a positive relationship between P/E and MP. Empirical findings from the regression analysis on the relationship between SIZE and MP indicate that there is an inverse relationship between S and MP. Finally, other variables (DPS and DP) have an insignificant impact on MP.

The findings of the study over the period 2006-2014 revealed that earning per share and the price-earnings ratio has a significant positive association with share price while dividend yield showed a significant inverse association with the share price of the banks. The study concludes that dividend yield; earnings per share and price-earnings ratio are the major determinants of share price (Bhattarai, 2014)

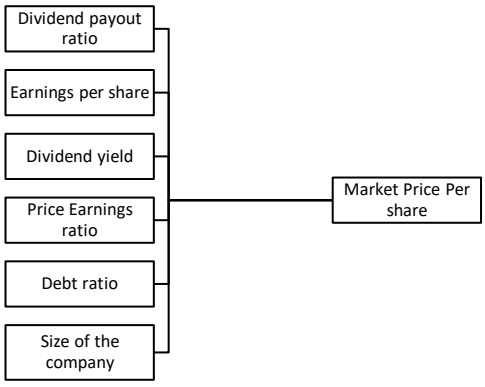
The empirical findings revealed a positive and significant relationship between ROE, EPS, BMVS, and market capitalization suggesting that these variables are major determinants of the market price of shares (Felix Kwame Aveh, Dadson Awunyo-Vitor , 2017).

Thus from the review of literature on share price determinants, it can be observed that most of the studies have used either time-series or cross-section data. There have also been attempts to identify the share price determinants using panel data.

III. THEORETICAL FRAMEWORK

The theoretical framework has basically explained the variables which are used by the researcher in his/her research. Basically, the theoretical framework is designed to explain the independent variables which are taken to explain the dependent variable. The extant literature available strongly supports the movement of the stock price as a consequence of firm-specific factors. In view of theory and major empirical evidence, it is expected that the market price per share of commercial banks may be influenced by dividend payout ratio, dividend yield, earnings per share, price-earnings ratio, and size of the finance company.

The conceptual framework was developed to test the effect of these variables on the market price per share of listed financial companies of Nepal.



Independent variables Dependent variable

IV. RESEARCH METHODOLOGY

A. The sample

This study has examined the determinants of the share price of a finance company in Nepal. This study adopted a descriptive and causal-comparative research design. All the listed finance companies were population and ten finance companies were selected as samples using a convenient sampling method for the study. The finance companies selected for the study were: Goodwill finance co ltd, Capital merchant banks, and finance ltd, Guheshwori merchant banks and finance ltd, ICFC finance ltd, Lalitpur finance ltd, Pokhara finance ltd, Nepal finance ltd, Crystal finance ltd, Janaki finance ltd, and Shrijana finance ltd. Secondary data were collected from the annual reports of the selected banks for the years 2009 – 2018.

B. The Variables and Hypotheses

Market Price per Share

The present study seeks to test the factors influencing the stock prices of finance companies in the Nepalese stock market. As we know stock price in the market can change minute by minute because it largely depends on the demand and supply of stocks. Due to these changes, it becomes difficult to decide which market price should be regressed as a measure of the dependent variable. In the present study closing price of the stock at the end of the financial year of the bank has been taken to represent market price. The market price is used as the dependent variable in the present study.

Dividend Payout Ratio

The dividend payout ratio is the number of dividends paid to stockholders relative to the amount of total net income of a company. So, this ratio provides an idea of how well earnings support the dividend payments. (Nidhi Malhotra, Kamini Tandon, 2013)Found that, the share price is significantly positively related to dividend

payout ratio. The hypothesis that could be tested, based on these findings is:
H1: There is a positive relationship between the dividend payout ratio and share price.

Debt Ratio
The debt ratio is a solvency ratio that measures a firm's total liabilities as a percentage of its total assets. In a sense, the debt ratio shows a company's ability to pay off its liabilities with its assets. It is derived by dividing total liabilities by total assets. There is an effect between Debt Ratio and market stock price in companies (Fouzan Al Qaisi,Asem Tahtamouni, Mustafa AL-Qudah, 2016). On the basis of the above findings, the hypothesis will be:
H2: There is a positive relationship between debt ratio and share price.

Dividend Yield
It depicts the percentage of dividends declared in a financial year with respect to its market price. It is derived by dividing the dividend per share by the market value per share. (Bhattarai, 2014)found that, the share price is significantly negatively related to the dividend yield. So the hypothesis could be:
H3: There is a negative relationship between dividend yield and share price.

Earnings per Share
Earnings per share serve as an indicator of a company's profitability. The increasing earnings per share generally result in high market prices. According to (Almumani, 2014) the earning per share has a positive relationship with market price, i.e., the higher the earning per share, the higher will the market price be. Based on theory and these empirical results, leads us to hypotheses to be tested:
H4: There is a positive relationship between Earning per Share and market price.

Price-Earnings ratio
PE_RATIO indicates the extent to which the earnings of each share are covered by its price. It tells whether the share price of a company is fairly valued, undervalued, or overvalued. In general, a high PE_RATIO suggests that investors are expecting higher earnings growth in the future compared to companies with a lower PE_RATIO. (Nidhi Malhotra, Kamini Tandon, 2013)Found that firms' book value, earning per share, and price-earnings ratio are having a significant positive association with firm's stock price. Therefore, the next hypothesis that could be tested from these findings is:
H5: There is a positive relationship between PE_RATIO and MPS.

Size of the company
Size is an important financial measure used to represent the volume of the finance company. The size of the firm can be measured in many ways, for example, through turnover, paid-up capital, capital employed, total assets, net sales, market capitalization, etc (Bhattarai, 2014). In the present study, bank size is measured by total assets scaled in a natural logarithm. Size is negatively related to the market price of equities (Almumani, 2014). The hypothesis derived from these findings and tested in this study are:
H6: There is a negative relationship between bank size and share price.

C. Model specification
Following the(Bhattarai, 2014)**,** (Malhotra, 2013)**,** (Almumani, 2014)this study investigates the market price of the equity share as a function of dividend payout ratio, dividend yield**,** debt ratio, earning per share, price-earnings ratio, and size**.** To achieve this objective a multiple regression model is specified as:

$$MPS_{it} = \beta_0 + \beta_1 DPR_{it} + \beta_2 DR_{it} + \beta_3 DY_{it} + \beta_4 EPS_{it} + \beta_5 PE\_RATIO_{it} + \beta_6 SIZE_{it} + \varepsilon_{it} \quad \ldots\ldots(1)$$

where:

MPS_{it}= market price of the share of the firm I in year t

DPR_{it} = Dividend Payout Ratio of the firm I in year t

DR_{it} = Debt Ratio of the firm I in year t

$_{it}$ = Dividend Yield of the firm I in year t

$depos_{it}$ = Earnings per Share of the firm I in year t

PE_RATIO_{it} = Price Earnings ratio of the firm I in year t

size = Bank size of the firm I in year t

β_0 = the intercept (constant term)

β_1 β_2 β_3 β_4 β_5 β_6 = regression coefficient for respective variables (i.e. the slope which represents the degree with which share price changes as the independent variable changes by one unit variable).

ε= Error terms

D. Model selection
Above mentioned equation named equation 1 is the econometrics model that largely gives the relation between a dependent variable and independent variables. The above equation explains the market price of Nepalese finance companies based on firm-specific factors. Under panel data analysis, generally run the fixed effect model or random-effect model based on the nature of data. We have to identify which model (fixed or random) is more suitable for our data. Sometimes due to no. observations and no time periods, the fixed and random effects model give contra dictionary results. In this situation we will conduct the Housman test under the following hypothesis:

H1: Random effect model is appropriate

H2: Fixed effect model is appropriate

V. RESULTS AND DISCUSSION

A. Descriptive Statistics

Table 1. Descriptive Statistics of Variables

Variables	Scale	Mean	Median	Maximum	Minimum	Standard deviation
MPS	Rupees	248.59	215.00	810.00	63.00	149.68
DPR	Ratio	0.3522	0.99	16.03	-48.82	6.275
DR	Ratio	0.8746	0.856	1.374	0.656	0.130
DY	Ratio	0.1782	0.1104	1.389	-1.096	0.3524
EPS	Rupees	38.29	27.83	263.06	0.61	38.90
PE_RATIO	Ratio	16.16	9.21	229.51	0.72	32.58
SIZE	Ln	7.571	7.6193	9.3074	5.2695	0.8200

Findings from the descriptive statistics as presented in Table 1shows that, the mean value of MPS is Rs.248.59 over the study period. This variable has a minimum value of Rs.63.00 and a maximum one at Rs. 810.00 during the study period. However, in terms of standard deviation, it is Rs. 149.68 during the study period. Similarly, firm-specific variables DPR has to mean value of 35.22% while DR and DY have mean values of 87.46% and 17.82% respectively. EPS has to mean value of Rs. 38.29 and PE_RATIO and SIZE have 16.16 and 7.571 respectively.

B. Correlation Analysis

The Pearson coefficient of correlation is used to assess the relationship between the market price of a share and dividend payout ratio, dividend yield, debt ratio, earnings per share, price-earnings ratio, and size of the bank. The Pearson correlation analysis results have been presented in Table 2.

Table 2. Pearson Correlation Analysis of Variables

	MPS	DPR	DR	DY	EPS	PE_RATIO	SIZE
MPS	1						
DPR	0.0741	1					
DR	-0.2560*	-0.3013**	1				
DY	-0.1723	0.3671**	0.0718	1			
EPS	0.2543*	0.3526**	-0.2116*	0.3998	1		
PE_RATIO	0.2958**	-0.3050**	0.0583	-0.4934**	-0.8453**	1	
SIZE	0.0851	-0.1036	0.2620*	-0.0716	-0.2754**	0.2992**	1

It is quite clear from Table 2 that the share price is significantly positively related to DPR, EPS, PE_RATIO, and SIZE, which means that these variables move together with share prices. However, the share price is significantly negatively related to debt ratio and dividend yield. All correlations coefficients among the independent variables were found to be less than 0.8; implying the absence of multicollinearity.

C. Regression Analysis

The regression coefficients of the model (1) were estimated using a random-effect model. The result from the Housman test suggests that the random effect model is appropriate for this data because this model has a probability value (0.6707) more than 0.05, thus, we do not have sufficient static evidence to reject the null hypothesis. Hence, we accept the null hypothesis i.e. random effect model is appropriate for the model. Findings from the regression analysis for the selected finance companies are depicted in Table 3.

The model is: $MPS_{it} = \beta_0 + \beta_1 DPR_{it} + \beta_2 DR_{it} + \beta_3 DY_{it} + \beta_4 EPS_{it} + \beta_5 PE\_RATIO_{it} + \beta_6 SIZE_{it} + \varepsilon_{it}$

a) Random effect model results

Table 3. Regression Results on the Determinants of Share Price

Predictors	Coefficients	t-statistics	p-value
Constant	-0.03631	-0.27053	0.7874
DPR	-0.00025	-0.1581	0.8747
DR	0.0175	0.22811	0.8201
DY	0.00327	0.10839	0.9139
EPS	0.96918	57.9498	0.0000
PE_RATIO	0.95644	56.2098	0.0000
SIZE	0.02668	2.30678	0.0235
R^2= 0.98063 F- stastics= 709.0795 F (probability) = 0.0000 Durbin Watson test= 2.1467			

The R-Square which is often referred to as the coefficient of determination of the variables is 0.98063. The R-Square which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 98.06% of the variability in the share prices of finance company This means that the model explains about 98.06% of the systematic variation in the dependent variable. That is, about 1.94% of the variations in the market price of the sampled finance companies are accounted for by other factors not captured by the model. This result is complemented by the adjusted R- square of about 97.92%, which in essence is the proportion of total variance that is explained by the model.

Similarly, findings from the Fishers ratio (i.e., the F-Statistics) which is proof of the validity of the estimated model as reflected in Table 3 indicates that the F is about 709.0795 and a p-value or F(sig) that is equal to 0.0000, this invariably suggests clearly that simultaneously the explanatory variables are significantly associated with the dependent variable. That is, they strongly determine the behavior of the market values of share prices. Further, The Durbin-Watson statistics value is 2.146 which means that the error term is independent and is free of autocorrelation.

Table 3 shows that the dividend payout ratio, debt ratio, and dividend yield have an inverse relationship with the market price of shares. This result basically means that with the influence of other variables held constant, a firm's dividend payout ratio, debt ratio, and dividend yield will have a negative impact on market price.

Empirical finding from the regression analysis shows a positive relationship between EPS and MPS. This is evident in the t-statistics value of (t-statistics = 57.9498 and the p-value(0.0000) < .05). The results can be explained as that an increase in earnings per share will invariably bring about a significant increase in the market prices of equity shares.

Another empirical finding from the regression analysis shows that there is a positive relationship between the PE_RATIO ratio and MPS. The coefficient of the P/E ratio is 0.95644 which means that when there is a 1 unit increase in price to earnings ratio, the share prices will increase by Rs.0.95644.

Finally, another variable SIZE has a significant impact on MPS. This indicates that SIZE has explanatory power toward stock price movement.

VI. CONCLUSION

The study of the determinants of equity share prices has been a subject of great interest to the researcher. Moreover, it is a subject of immense curiosity especially finance companies to identify the factors that influence share prices. Specifically, this study examined the effects of dividend payout ratio, debt ratio, dividend yield, earning per share, price-earnings ratio, and size on the share price of finance companies listed on Nepal stock exchange Limited.

The findings of the study over the period 2009-2018 revealed that earning per share and price-earnings ratio and size of the company have a significant positive association with share price while dividend yield, dividend payout ratio, and debt ratio showed the significant inverse association with the share price of the finance companies. The study concludes that earnings per share and price-earnings ratio and size are the major determinants of the share price of Nepalese finance companies. The results of this study uncovered new evidence from the Nepalese perspective, which is considered to be valuable to the market participants. Thus, the findings of this study seem to be particularly useful for equity investors and fund managers as they

can watch out for these significant factors while estimating stock returns and predicting share prices.

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