Determinants of Share Price of Nepalese Commercial Banks

*Yuga Raj Bhattarai**

Abstract

This study examines the determinants of share price of commercial banks listed on the Nepal Stock Exchange Limited over the period of 2006 to 2014. Data were sourced from the annual reports of the sampled banks and analyzed using regression model. The results revealed that earning per share and price- earnings ratios have the significant positive association with share price while dividend yield showed the significant inverse association with share price. The major conclusion of the study is that dividend yield, earning per share and price-earnings ratio are the most influencing factors in determining share price in Nepalese commercial banks.

Key words: *Share price, dividend payout ratio, dividend yield, earnings per share, price earnings ratio, size, determinants, commercial banks*

INTRODUCTION

One of the major avenues of investment that has the potential of yielding considerable returns to investors is the investment in equity shares. It is also a source of finance for the capital requirements of firms. 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. The factors behind the increase or decrease in the demand and supply of stock prices can be categorized into three main types: technical factors, fundamental factors and market sentiments. However, knowledge of such factors and their possible impact on share prices is highly appreciable as it would help investors make wise investment decisions and enable firms to enhance their market value.

The pioneering work on share price determinants by Collins (1957) for the US identified dividend, net profit, operating earnings and book value as the factors influencing share prices. Following Collins (1957) there have been various attempts to identify the determinants of share prices for different markets. The other empirical studies viz. Taulbee (2005), Nawazish (2008), Al-Shubiri (2010), Sharma (2011), Khan and Amanullah (2012), Srinivasan (2012), Malhotra and Tandon (2013), Almumani (2014)

———————

* Mr. Bhattarai is Associate Professor at Patan Multiple Campus, Tribhuvan University, Nepal

among others reveal that various factors in different markets determine the share price. Determining share prices is a complex and conflicting task. Shiller (1981) found that stock prices are not stable and fluctuate excessively in relation to the news about fundamentals (as dividends) primarily due to market irrationality. Thus, it is asserted that understanding the impact of various fundamental variables on stock price is very much helpful to investors as it will help them in taking profitable investment decisions.

The present study deals with an attempt to analyze the determinants of share price of commercial banks on the basis of financial statements information in Nepalese context. The objective of this study is to examine the impact of the internal factor on the stock prices of Nepalese commercial banks. In the light of the aforementioned objective, the remaining part of this study is structured as follows: the next section presents theoretical framework and reviews of literature; this section is followed by research methods used in the study. The second last section provides empirical results and discussion, and the final section offers conclusion of the study.

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 Uddin (2009) analyzed the relationship of microeconomic factors with the stock price by using multiple regression analysis. This research found a significant linear relationship among market return and some microeconomic factors such as net asset value per share, dividend percentage, earning per share of bank leasing, and insurance companies. 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 auto sector.

The study of Sharma (2011) examined the empirical relationship between equity share prices and explanatory variables such as: book value per share, dividend per share, earning per share, price earnings ratio, dividend yield, dividend payout, size in terms of sale, and net worth for the period 1993-94 to 2008-09. The results revealed that earning per share, dividend per share, and book value per share has significant impact on the market price of share. Furthermore, results of the study indicated

that dividend per share and earnings per share being the strongest determinants of market price, so the results of the study supports liberal dividend policy and suggests companies to pay regular dividends. Focusing on Pakistan Khan and Amanullah (2012) investigated different determinants of share prices of Karachi Stock Exchange (KSE) 100 index using Linear Multiple Regression model. A sample of 34 companies has been randomly selected from 34 sectors of KSE. Ten years' (2000-2009) data has been collected for the sample companies. The study found that rise in GDP, dividend and P/E ratio leads to rise in share prices but B/M ratio and interest rate are negatively related to share prices.

The study of Malhotra and Tandon (2013) attempted to determine the factors that influence stock prices in the context of National Stock Exchange (NSE) of 100 companies. A sample of 95 companies was selected for the period 2007- 2012 and linear regression model was used. The results indicated that firms' book value, earning per share, and price-earnings ratio are having a significant positive association with firm's stock price while dividend yield is having a significant inverse association with the market price of the firm's stock.

Almumani (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 banks 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 insignificant impact on MP.

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.

CONCEPTUAL FRAMEWORK

The conceptual frame work is designed to understand the factor that may affect the market price per share. The extant literature available strongly supports the movement of stock price as a consequence of firm specific factors. In view of theory and major empirical evidences, 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 bank. The conceptual framework developed to test the

effect of these variables on the market price per share of listed commercial banks of Nepal in this study is portrayed in Figure 1.

Figure -1: Conceptual Framework

Dependent Variable   Independent Variables
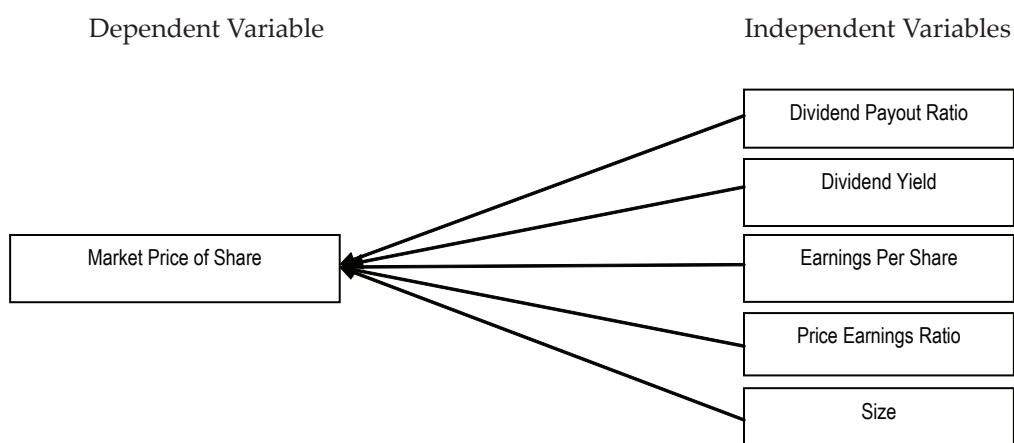
The independent variables are assumed to affect the dependent variable, share price of commercial banks. The independent variables are selected depending upon prior theoretical and empirical grounds.

RESEARCH METHODOLOGY

The Sample

This study has examined the determinants of share price of commercial banks in Nepal. This study adopted descriptive and causal comparative research design. All the listed commercial banks were population and nine commercial banks were selected as sample using convenient sampling method for the study. The banks selected for the study were: Nabil Bank Ltd, Nepal Investment Bank Limited, Standard Chartered Bank Ltd, Everest Bank Ltd., Bank of Kathmandu, Machhachapuchhre Bank Ltd., Laxmi Bank Ltd., Kumari Bank Ltd., and Siddharth Bank Ltd. Secondary data were collected from the annual reports of the selected banks for the years 2006 - 2014.

Model Specification

Following Irfan and Nishat (2002), Malhotra and Tandon (2013) and Almumani (2014), this study investigates that market price of the equity share as a function of

dividend payout ratio, dividend yield, earning per share, price earnings ratio, and size. To achieve this objective a multiple regression model is specified as:

$$MP_{it} = \beta_0 + \beta_1\, DPR_{it} + \beta_2\, DY_{it} + \beta_3\, EPS_{it} + \beta_4\, P/E_{it} + \beta_5\, SIZE_{it} + \varepsilon_{it} \qquad (1)$$

where:

MP_{it} = market price of the share of firm i in year t

DPR_{it} = dividend payout ratio of firm i in year t

DY_{it} = dividend declared in a financial year with respect to its market price firm i in year t

EPS_{it} = earnings per share of firm i in year t

P/E_{it} = price earnings ratio of firm i in year t

$SIZE_{it}$ = bank size (natural logarithm of total assets) of firm i in year t

β_0 = the intercept (constant term)

$\beta_1,\ \beta_2,\ \beta_3\ \beta_4,\ \beta_5$ = 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

The Variables and Hypotheses

Market Price

The present study seeks to test the factors influencing stock prices of commercial banks in Nepalese stock market. As observed by researcher such as Malhotra (1987),Piotroski and Roulstone (2004), and Zakir and Khanna (1982), stock price can change minute by minute due to changes in the buying and selling pressure. Due to these changes it becomes difficult to decide as to which market price should be regressed as a measure of dependent variable. In the present study closing price of stock at the end of the financial year of the bank has been taken to represent market price. The market price is used as dependent variable in the present study.

Dividend Payout Ratio

The dividend payout ratio provides an idea of how well earnings support the dividend payments. Dhanani (2005) found that dividend policy serves to enhance corporate market value. In fact, more mature companies tend to have a higher payout ratio.

Conversely, it means that there is an inverse relation between payout ratio and share price changes. The hypothesis that could be tested, based on these findings is:

H_1: There is a negative relationship between dividend payout ratio and share price.

Dividend Yield

It depicts the percentage of dividend declared in a financial year with respect to its market price. It is derived by dividing dividend per share with market value per share. Malhotra and Tandon (2013) found a significant inverse association between dividend yield and market price of the firm's stock. So the hypothesis is:

H_2: 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 results in high market price. According to Ball and Brown (1968), Baskin (1989), Malhotra and Tandon (2013), Almumani (2014), Jatoi, Shabir, Hamad, Iqbal and Muhammad (2014) the earnings per share has a positive relationship with market price, that is, higher the earning per share, higher will the market price be. Based on theory and these empirical results, another hypothesis to be tested in this study is:

H_3: There is a positive relationship between earnings per share and share price.

Price Earnings Ratio

It relates with the comparison of market value with its earnings per share. The price earnings 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 P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. In the same token, Khan and Amanullah (2012), Malhotra and Tandon (2013), Almumani (2014) also indicated that price-earnings ratio have a significant positive association with firm's stock price. In line with prior studies, the fourth hypothesis to be tested is:

H_4: There is a positive relationship between P/E ratio and share price.

Size

Size is an important financial measure used to represent the volume of the bank. 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. In the present study bank size is measured by total asset scaled in natural logarithm. According to Almumani (2014) size is negatively related to market price of equities. However, large bank generally offer better banking services opportunities to customers and borrower than the smaller ones. The banks by virtue of their higher size generally occupy a stronger and dominant position in the stock market. The shares of large banks are actively traded in the stock exchange; they provide more liquidity and marketability to the investors. Thus, the temptation to buy shares of large banks leads to increase its market price of share. Chandra (1981) indicated that size has significant positive impact on market price of share. The hypothesis derived from these findings and tested in this study is:

H_5: There is a positive relationship between the bank size and share price.

Explanatory variables used in the study along with their expected sign in the empirical estimate as specified in equation (1) are summarized in Table 1.The dependent variable is market value of share.

Table 1: Description of Explanatory Variables and Their Expected Sign

Variables	Description	Expected Signs
DPR	Dividend Payout Ratio	-
DY	Dividend Yield	-
EPS	Earnings Per Share	+
P/E	Price Earnings Ratio	+
Size	Size of Banks	+

RESULTS AND DISCUSSION

Descriptive Statistics

Findings from the descriptive statistics as presented in Table 2 shows that, mean value of MP is Rs. 1451.494 over the study period. This variable has minimum value of Rs.107 and maximum one at Rs. 6,830 during the study period. However, in terms of standard deviation it is Rs. 1,463.01 during the study period.

Table 2: Descriptive Statistics of Variables

Variables	Scale	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25	50	75
MP	Rupees	1451.494	1463.012	107.000	6830.000	500.000	960.000	1817.500
DPR	Ratio	0.300	0.248	0.000	0.739	0.041	0.337	0.536
DY	Ratio	0.012	0.013	0.000	0.049	0.001	0.007	0.023
EPS	Rupees	49.937	39.567	1.540	175.840	18.515	38.630	78.035
P/E	Ratio	34.212	30.114	10.070	242.540	17.200	27.590	42.445
SIZE	Ln	24.023	0.631	22.283	25.192	23.671	24.041	24.450

Source: Annual report of sample companies and results are drawn from SPSS-16.

Correlation Analysis

The Pearson co-efficient of correlation is used to assess the relationship between market price of share and dividend payout ratio, dividend yield, earnings per share, price earnings ratio, size of the bank at 1% and 5% level of significance. The Pearson correlation analysis results have been presented in Table 3.

Table 3: Pearson Correlation Analysis of Variables

Variable	MP	DPR	DY	EPS	P/E	SIZE
MP	1					
DPR	.429**	1				
DY	-.012	.361**	1			
EPS	.838**	.593**	.291**	1		
P/E	.046	-.332**	-.374**	-.214	1	
SIZE	.261*	.521**	.353**	.441**	-.297**	1

** indicates correlation is significant at the 0.01 level of significance (2-tailed).

Source: Annual report of sample companies and results are drawn from SPSS-16.

It is quite clear from Table 3 that the share price is significantly positively related to DPR, EPS and SIZE, which means that these variable move together with share prices. However, share price is significantly negatively related to dividend yield. All correlations coefficients among the independent variables were found to be less than 0.8; implying the absence of multicollinearity.

Regression Results

The regression coefficients of model (1) were estimated using multiple regressions analysis. Findings from the regression analysis for the selected banks are depicted in Table 4.

Table 4: Regression Results on the Determinants of Share Price

The model is: $MP_{it} = \beta_0 + \beta_1\,DPR_{it} + \beta_2\,DY_{it} + \beta_3\,EPS_{it} + \beta_4\,P/E_{it} + \beta_5\,SIZE_{it} + \varepsilon_{it}$

Predictors	Coefficients	t-statistic	p-value	VIF
Constant	1985.743	.569	.571	
DPR	166.155	.396	.693	1.868
DY	-23854.884**	-3.709	.000	1.299
EPS	34.664**	14.196	.000	1.608
P/E	7.843**	2.784	.007	1.240
Size	-95.556	-.647	.520	1.496
	R^2 =.797, Adj.R^2 =.783, F-value =58.756, F(sig) = 0.000, D.W.= 2.02			

*** indicates significant at the 0.01 level (2-tailed).*

Source: Results are drawn from SPSS-16.

The R-Square which is often referred to as the coefficient of determination of the variables is .797.   The R-Square which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 79.7% of the variability in the share prices of banks. This means that the model explains about 79.7% of the systematic variation in the dependent variable. That is, about 20.3% of the variations in market price of the sampled banks are accounted for by other factors not captured by the model. This result is complimented by the adjusted R- square of about 78.3%, 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 a proof of the validity of the estimated model as reflected in Table.4, indicates that, the F is about 58.756 and a p-value or F(sig) that is equal to 0.000, 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 2.02 which mean that the error term is independent and is free of autocorrelation.

Table 4 shows   that dividend yield has an inverse relationship with that of market price. This result basically means that with the influence of other variable held

constant, as firm's dividend yield will have negative impact on market price. The result is supported with the findings of Zahir and Khanna (1982), Zahir (1992), Irfan and Nishat (2002), Malhotra and Tandon (2013). In essence, it could be deduced from this result that the DY of banks has a significant negative impact on the MP of listed banks in Nepal.

Empirical finding from the regression analysis shows a positive relationship between EPS and MP. This is evident in the t-statistics value of (t-statistics = 14.196 and the p-value < .01). 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. Importantly this outcome is consistent with the findings provided in AL-Omar and AL-Mutairi (2008), Somoye et al. (2009), Uddin (2009), Malhotra and Tandon, (2013), Jatoi, Shabir, Hamad, Iqbal, and Muhammad (2014) where it has been observed that earning per share is a major determinant of stock prices.

Another empirical finding from the regression analysis shows that there is positive relationship between P/E ratio and MP. The coefficient of P/E ratio is 7.843 which mean that when there is 1 unit increase in price to earnings ratio, the share prices will increases by Rs.7.843. This outcome is consistent with findings of Oyama (1997), and Malhotra and Tandon (2013) that P/E ratio has a significant positive impact on share prices. Finally, other variables (DPR and SIZE) have insignificant impact on MP. This indicates that DPR and SIZE have no explanatory power toward stock price movement.

CONCLUSION

The study of the determinants of equity share prices has been a subject of great interest these days. Moreover, it is a subject of immense curiosity especially a banking sector to identify the factors that influence share prices. The shares of commercial banks offer the investment opportunities to Nepalese investors because these shares are more frequently traded in the market than as compared to others in Nepalese context. Specifically, this study examined the effects of dividend payout ratio, dividend yield, earning per share, price- earnings ratio and size on the share price of banks listed on Nepal stock exchange Limited.

The findings of the study over the period 2006-2014 revealed that earning per share and price-earnings ratio have the significant positive association with share price while dividend yield showed the 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 of Nepalese commercial banks. The results of this study uncovered new evidence in Nepalese perspective, which are

considered to be valuable to the market participants. Thus, findings of the this study seems 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.

References

AL-Shubiri, F. (2010). Analysis the determinants of market stock price movements: An empirical study of Jordanian commercial banks. *International Journal of Business & Management, 5*(10), 137-147.

Almumani, M. A. (2014).Determinants of equity share prices of the listed banks in Amman stock exchange: Quantitative approach. *International Journal of Business and Social Science, 5*(1), 91-104.

Al-Omar, H. & Al-Mutairi, A. (2008). The Relationship between the Kuwaiti Banks Share Prices and Their Attributes. *Scientific Journal of King Faisal University (Humanities and Management Sciences), 9* (1), 325-338.

Ball, R., & Brown, P. (1968). An Empirical evaluation of accounting income numbers. *Journal of Accounting Research, 6*(2), 157–178.

Baskin, J. (1989). Dividend policy and the volatility of common stock. *Journal of Portfolio Management, 15*(3), 19-25.

Chandra, P.(1981).*Valuation of equity shares in India*. New Delhi: Sultan Chand and Sons.

Collins, J. (1957). How to study the behavior of bank stocks. *The Analysts Journal, 13*(2), 109-113.

Dhanani, A. (2005). Corporate dividend policy: The views of British financial managers. *Journal of Business Finance & Accounting, 32*(7), 1625-1672.

Irfan, C., & Nishat, M. (2002). Key fundamental factors and long-run price changes in an emerging market: A case study of Karachi stock exchange (KSE). *The Pakistan Development Review, 41*, 517–533.

Jatoi, M.Z., Shabir, G.,Hamad, N.,Iqbal N. & Muhammad, K. (2014).A Regressional impact of earning per share on market value of share: A case study cement industry of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4*(4), 221-227.

Khan, M., & Amanullah. (2012). Determinants of share prices at Karachi stock exchange. *International Journal of Business & Management Studies, 4*, 1309-1347.

Malhotra, V.(1987). *Determinants of equity prices in India* (Unpublished doctoral dissertation). Himachal University, India.

Malhotra, N., & Tandon, K.(2013). Determinants of stock prices: Empirical evidence from NSE 100 companies. *IRACST- International Journal of Research in Management & Technology (IJRMT), 3*(3), 86-95.

Nawazish, E. M. (2008). Size and value premium in Karachi stock exchange. *Cahier DRM – Finance, 6*, 1-39.

Nirmala, P.S., Sanju, P. S. & Ramachandran, M. (2011). Determinants of share prices in India. *Journal of Emerging Trends in Economics and Management Science (JETEMS), 2*(2), 124-130.

Oyama, T.(1997).Determinants of stock prices: The case of Zimbabwe. *IMF Working Paper No.97/117.* Retrieved from http://www.imf.org/external/pubs/ft/wp/wp97117.pdf

Piotroski, J.D. & Roulstone, B. (2004). The influence of analysts, institutional investors, and insiders on the incorporation of market, industry, and firm – specific information into stock prices. *The Accounting Review, 79*, 1119-1151.

Sharma, S. (2011). Determinants of equity share prices in India. *Journal of Arts, Science & Commerce, 2*(4), 51-60.

Shiller, R.(1981). Do stock prices move too much to be justified by subsequent changes in dividends? *American Economic Review, 71*, 421–436.

Somoye, R. O. C., Akintoye, I. R., & Oseni, J. E. (2009). Determinants of equity prices in the stock markets. *International Research Journal of Finance and Economics, 30*, 177-189.

Srinivasan, P. (2012). Determinants of equity share prices in India: A panel data approach. *The Romanian Economic Journal, 46*, 205-228.

Taulbee, N.(2005). Influences on the stock market: An examination of the effect of economic variables on the S&P 500. *The Park Place Economist, 9*, 91-100.

Uddin, M. B. (2009). Determinants of market price of stock: A study on bank leasing and insurance. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 2*(2), 124-130.

Zahir, M. A. (1992). Factors affecting equity prices in India. *The Chartered Accountant, 40*, 743-748.

Zahir, M., & Khanna, Y. (1982). Determinants of stock prices in India. *The Chartered Accountant, 30*, 521-523.