# The Relationship between the Determinants of Equity Prices in Nepal

Churamani Pandey[1], M.Phil. and Krishna Bahadur Sunar[2]

## Abstract

*The major objective of this study is to investigate the relationship of share price with dividend payout ratio, retention ratio, dividend per share, earning per share and return on equity. The samples have been chosen on the basis of easily availability of annual reports. The total number of observations is fifty having ten years annual financial data of five sampled banks. As per research design descriptive and Correlational research design have been employed. The statistical tools consist of mean, standard deviation as well as Correlation analyses. The dependent variable market price per share (MPS) is positively correlated with independent variables such as earning per share, dividend per share, return on equity and dividend payout ratio which implies that they move in the same direction. In other words, when one increases another also increases and vice versa. Moreover, retention ratio is negatively correlated with market price per share.*

**Keywords:** *market price per share, dividend payout ratio, retention ratio, return on equity, dividend per share, earnings per share.*

## Introduction

Stock market is the primary place for institutions to deploy shares to raise fund. Listed public institutions deploy shares through stock market to collect additional fund for the expansion of their business. The stock market is the common factor between buyers and sellers of these stocks so that each institution listed in the stock market offers its 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. Market is the main cause for the development of industry and commerce as it plays an important role in developing industrial sector of the country (Sen & Ray, 2013). This is the reason that all sectors like government, industry, corporation and even the central bank of the nation keep a close watch on the happening of the stock market. A well-organized and well-regulated capital market facilitates sustainable development of economy by providing long term fund in exchange for financial assets to investors.

Dividend policy is recognized as one of vital strategic decisions of a firm. The dividend policy describes what amount of dividend should be paid, when to release dividend in which form, when and how much to retain for future investment and to

1 Mr. Pandey is associated with UNIVERSAL College as a visiting faculty.
2 Mr. Sunar is a freelancer.

deal with situational issues. A decline in release of dividend can reduce the value of share. Dividend is the return on investment made by individual, group or organization (Iftilhar, Raja & Sehrank, 2017).

Dividend policy is a financial policy all about for the utilization of profits earned by a firm. It simply guides the management regarding the ratio of payment of dividend and reinvestment of the profits of the firm. Dividend irrelevance theory states that shareholders are not too much concerned with the firm's dividend policy as they can easily sell out some of their shares if they are in need of cash. This theory shows that dividend payment has little to no impact on stock price. Residual, stability and hybrid are the three main dividend policies. The residual dividend policy allows dividend payments after meeting all projects' capital requirements. This policy is mainly used by all those firms which try to keep a balance between their debts to equity ratio. With the help of dividend stability policy, quarterly dividends are paid as fraction of annual earnings. As a result, uncertainty of owners may decrease as they get the revenue. This policy is mostly used by the firms which pay firm's earnings to owners rather than making further investments. Hybrid dividend policy is commonly used approach by a majority of dividend paying firms. Firms using this approach consider debt to equity ratio as a goal. Firms using this approach normally have one set dividend that may be paid easily being a minor part of annual firms' income. Additional dividend is paid in case income crosses general level (Sharif, Adnan & Jan, 2015).

Many empirical studies have been carried out in the developed capital market to analyze the relationship between dividend and stock prices like Lintner (1956), Modigliani and Miller (1961), Gordon (1962), Friend and Puckett (1964), Walter (1966), Van Horne and McDonald (1971), Chawla and Shrinivasan (1987). However, no conclusive relationship exists between the amount paid out as dividend and the market price of share. There is still a controversy concerning the relationship between dividend and market price of shares.

This study aims to investigate the relationship of share price with dividend payout ratio, retention ratio, dividend per share, earning per share and return on equity.

## Review of Literature

Friend and Puckett (1964) analyze the relationship of the stock prices and dividends. They claim that the stock prices are an expression of discounted dividend income or capital gains. Tsoukalas and Sil (1999) explore the predictability of the equity returns examining the extent of the influence of fundamental values on the stock price. The dependence of stock returns and fundamental variables has been examined extensively and the research suggests that in the majority of times, fundamental values such as

dividend yield are able to explain either short of long term behavior of stocks. Their findings are such that they prove that cash announcements from managers are used as a signaling method of temptation, if it is safe to say, investors into buying the stock and increasing its price through increased demand.

Malhotra and Tandon (2013) are engaged with fundamental values and try to explain which and in what extent these chosen fundamental variables, shape the stock price. The findings of the study showed that price earnings ratio, earnings per share and book value per share had a significant influence in the stock price, whereas dividend yield had an inverse Correlation with the stock price.

Kraft and Kraft (1977) tried to examine the relationship between common stock prices and money supply. Their findings were that there was no causal relationship between stock price, percentage change in the money supply and Moody's AAA corporate bond rate. They later claim that for the prediction of the variables that affect sock prices further econometric research should be under taken.

Fama and French (1995) argue that there are two variables that capture the majority of the explanation behind the movements of stock prices. These two variables are market equity or market value and the ratio of book to market value or equity. Hence, it is established that with rational pricing, market value and book to market value, thus firm size, have to be representative form common stock risk factors.

Almumani (2014) examines the empirical relationship between stock price and selected variables: book value per share, dividend per share, earning ratio, dividend payout, and size in terms of total assets using a sample of seven Jordanian banks and 49 observations (including branches of seven banks) over the 2005-2011 interval period listed on Amman Stock Exchange (ASE). This study dealt with fundamental analyses of share valuation by using Correlation, Regression, Ratio which revealed that variables earning per share, book value per share, price earnings ratio, and size are significant determinants of stock price.

Furthermore, Hatta and Dwiyanto (2012) test the Correlation between stock prices and fundamental variables such as Earnings per share, dividend payout ratio, price to earnings ratio debt to equity ratio and a handful of other accounting-based factors. According to the findings it is shown that earnings per share and price to earnings ratio have a significant and positive relationship with stock price whereas debt to equity ratio and net profit margin have the opposite effects on the stock price.

Baral and Pradhan (2018) found the positive relationship between EPS, P/E, DPR and MPS on top loser commercial banks of Nepal whereas negative relationship with DPR in top gainer banks. Based upon the analyses and interpretation of the data, out of sampled top five gainers and top five losers' commercial banks; among them except two banks showed that their market price is responsive to the dividend announcement. This means 80 percent of sample banks support that their market price of share changes due to the announcement of dividend. Thus, Nepalese commercial banks have significant impact of dividend in their market share price.

**Market price**

As observed by Malhotra (1987), share 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 the share 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**

This shows the amount of dividend as a percentage of earning available for equity share. It shows the relationship between the banks earning per share and dividend provided to shareholders. Sharif, Adnan and Jan (2015) conclude that dividend payout ratio has statistically significant relationship with stock market price.

**Retention ratio**

Retention ratio indicates the percentage of a company's earnings that are not paid out in dividend but credited to retained earnings. It is the opposite of the dividend payout ratio, so that also called the retention rate. Iftikhar, Raja and Sehran (2017) conclude that stock prices and retention ratio have significant negative Correlation.

**Dividend per share**

Dividend per share (DPS) is the sum of declared dividends issued by a company for every equity share outstanding. The figure is calculated by dividing the total dividends paid by a business over a financial period by the number of outstanding equity shares issued. Michael and Benson (2014) conclude that dividend per share has a significant positive relationship with market 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 Baskin (1989), Almumani (2014), the earnings per share has a positive relationship with market price i.e., higher the earning per share, higher will be the market price.

### Return on equity (ROE)

Return on equity is the measure of financial performance calculated by dividing net income by shareholder's equity. Pradhan and Paudel (2017) conclude that ROE has significant positive Correlation with share price.

## Methodology

This research is purely based on secondary data of sample banks and has employed Correlational research design to show the degree and direction of the relationship between different variables like share price, dividend payout ratio, retention ratio, dividend per share, earning per share and return on equity. There are 27 commercial banks (government and private sector owned) operating in Nepal. All 27 licensed Nepalese commercial banks have been considered as the total population of this study. Out of them, only five commercial banks namely Nabil Bank Ltd, Standard Chartered Bank Ltd, Sanima Bank Ltd, Nepal Investment Bank Ltd, and Nepal SBI Bank Ltd are taken as a sample. Five commercial banks consist of fifty observations during fiscal year 2010/11 to 2019/20.

## Results

### Descriptive analyses

The descriptive statistics used in this study consists of mean, standard deviation, minimum and maximum values associated with variables under considerations.

**Table 1: The descriptive statistics**

*This table summarizes the descriptive statistics- mean values and standard deviation of different variables used in this study during the period 2009/10 through 2019/20 associated with five sample banks. The independent variables are earning per share, dividend per share, return on equity, dividend payout ratio, retention ratio and dependent variable is market price per share. N is the number of observations.*

| Variables | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| MPS | 50 | 225.00 | 3600.00 | 1160.22 | 818.67 |
| EPS | 50 | 6.04 | 95.14 | 41.76 | 21.85 |
| DPS | 50 | 5.50 | 105.26 | 33.72 | 20.16 |
| ROE | 50 | 5.72 | 32.78 | 20.35 | 6.65 |
| DPR | 50 | .42 | 2.97 | .83 | .37 |
| RR | 50 | -1.97 | .58 | .17 | .37 |
| Valid N (listwise) | 50 | | | | |

Table 1 shows the descriptive statistics. Clearly, market price per share ranges from

Rs. 225 to Rs. 3600, leading the average market price per share to Rs. 1160.22. The earning per share varies from Rs. 6.04 to Rs. 95.14, leading to average of Rs. 41.76. Likewise, dividend per share ranges from Rs. 5.5 to Rs. 105.26, leading to average Rs. 33.72. Return on equity ranges from Rs.5.72 to Rs.32.78, leading to average of Rs. 20.35. Dividend payout ratio ranges from 0.42 to 2.97, leading to average of 0.83. Retention ratio ranges from negative 1.97 to 0.58, leading to average 0.17. The variation as indicated by SD is largest for the dependent variable market price per share and lowest for dividend payout ratio and retention ratio.

## Correlation Analyses

Bivariate Pearson's correlation coefficient analyses has been attempted to find the correlations between dependent and independent variables and the results are presented in table 2.

**Table 2: Bivariate Pearson correlation coefficients for market price per share and determinants of stock price**

*This table reveals the bivariate Pearson correlation coefficients of MPS. The independent variables are; EPS as earnings per share, ROE as return on equity, DPR as dividend payout ratio, RR as retention ratio.*

**Correlations**

| | | MPS | EPS | ROE | DPR | RR |
|---|---|---|---|---|---|---|
| MPS | Pearson Correlation | 1 | .717** | .467** | .147 | -.147 |
| | Sig. (2-tailed) | | .000 | .001 | .307 | .307 |
| | N | 50 | 50 | 50 | 50 | 50 |
| EPS | Pearson Correlation | .717** | 1 | .816** | -.116 | .116 |
| | Sig. (2-tailed) | .000 | | .000 | .423 | .423 |
| | N | 50 | 50 | 50 | 50 | 50 |
| ROE | Pearson Correlation | .467** | .816** | 1 | -.232 | .232 |
| | Sig. (2-tailed) | .001 | .000 | | .106 | .106 |
| | N | 50 | 50 | 50 | 50 | 50 |
| DPR | Pearson Correlation | .147 | -.116 | -.232 | 1 | -1.000** |
| | Sig. (2-tailed) | .307 | .423 | .106 | | .000 |
| | N | 50 | 50 | 50 | 50 | 50 |
| RR | Pearson Correlation | -.147 | .116 | .232 | -1.000** | 1 |
| | Sig. (2-tailed) | .307 | .423 | .106 | .000 | |
| | N | 50 | 50 | 50 | 50 | 50 |

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

The Correlation figures shown in the table 2 reflect significant Correlation between

market price per share and earning per share. The Correlation between MPS and EPS is 0.717. It shows that MPS is positively correlated with EPS. It indicates that when EPS increases, MPS also increases and vice-versa. The Correlation coefficient between MPS and ROE is 0.467. It shows that MPS is positively correlated with ROE. It indicates that when ROE increases, MPS also increases. The Correlation coefficient between MPS and RR is -0.147. It shows that MPS is negatively correlated with the retention ratio (RR).

## Conclusion

The market price per share is positively related with earning per share, dividend per share, return on equity and dividend payout ratio. The market price per share is negatively related with the retention ratio. The result shows that higher the earning per share, dividend per share, return on equity and dividend payout ratio, higher would be the market price per share. The result also indicates that lower the retention ratio, higher would be the market price per share.

## References

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.

Baral, R. K. & Pradhan, A. (2018). Impact of dividend policy on share price of commercial bank in Nepal. *International Research Journal of Management Science*, *3*, 107-122.

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

Chawla, D. & Srinivasan, G. (1987). Impact of dividend and retention on share price: An econometric study. *Decision*, *14*(3), 137-140.

Fama, E. F. & French, K. R. (1995). Size and book-to-market factors in earnings and returns. *The Journal of Finance*, 50(1), 131–155.

Friend, I. & Puckett, M. (1964). Dividends and stock prices. *The American Economic Review*, *54*(5), 656-682.

Gordon, M. J. (1962). The savings investment and valuation of a corporation. *The Review of Economics and Statistics*, 44(1), 37-51.

Hatta, A. J. & Dwiyanto, B. S. (2012). The company fundamental factors and systematic risk in increasing stock price. *Journal of Economics, Business, and Accountancy Ventura*, 15(2), 245–256.

Iftikhar, A. B., Raja, N. U. D. J. & Sehran, K. N. (2017). Impact of dividend policy on stock prices of firm. *Theoretical & Applied Science*, 47(3), 32-37.

Kraft, J. & Kraft, A. (1977). Determinants of common stock prices: A time series analyses. *The Journal of Finance*, XXXII (2), 417–425.

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American economic review*, *46*(2), 97-113.

Malhotra, N. & Tandon, K. (2013). Determinants of stock prices: Empirical evidence from NSE 100 Companies. *International Journal of Research in Management & Technology,* 3(3), 89-95.

Malhotra, S. V. (1987). Determinants of equity prices in India. An unpublished Ph. D. thesis, submitted to Department of Commerce, Himachal Pardesh University.

Michael, O. O. & Benson, A. K. (2014). The impact of dividend policy on stock prices of quoted firms in Nigeria. *International Journal of Economics, Commerce and Management*, 2 (9), 1- 17.

Miller, M. H. & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, *34*(4), 411-433.

Pradhan, R. S. & Paudel, L. (2017). Impact of fundamental factors on stock price: A case of Nepalese commercial banks. Available at: http://dx.doi.org/10.2139/ssrn.3044108.

Sen, S. & Ray, R. (2013). Determinants of stock prices in India. *The ICFAI Journal of Applied Finance*, 9 (7), 35-40.

Sharif, I., Adnan, A. L. İ. & Jan, F. A. (2015). Effect of dividend policy on stock prices. *Business & Management Studies: An International Journal*, *3*(1), 56-87.

Tsoukalas, D. & Sil, S. (1999). The determinants of stock prices: Evidence from The United Kingdom stock market. *Management Research News*, 22(5), 1–14.

Van Horne, J. C. & McDonald, J. G. (1971). Dividend policy and new equity financing. *The Journal of Finance*, *26*(2), 507-519.

Walter, J. E. (1966). Dividend policies and common stock prices. *Journal of Finance*, 29-41.