Effects of Dividends on Stock Prices in Nepal

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Abstract

This paper examines the impact of dividends on stock price in the context of Nepal. A majority of earlier studies conducted in developed countries show that dividend has a strong effect than retained earnings. The study examines whether this is consistent in the context of Nepal (or not) and the implication particularly to the banking and non-banking sector. To achieve the objective of the study, a descriptive and analytical research design has been administered. The secondary data are used to test this impact. In order to examine the impact of dividends on stock prices, a multivariate linear regression analysis has been implied in which current market stock price is taken as a dependent variable and four other variables namely Dividend Per Share (DPS), Retained Earnings Per Share (REPS), Lagged Price Earnings Ratio (P/E ratio) and Lagged Market Price Per Share (MPS) as the explanatory variables. This attempt has been made to test the dividends retained earning hypothesis and to examine the estimated relationship over the period of time. The overall conclusion drawn in this study reveals that, the impact of dividends is more pronounced than that of retained earnings in the context of Nepal. Dividend has a significant effect on market stock price in both banking and non-banking sector.

Key words: Dividends, stock price, banking and non- banking sector, multivariate linear regression analysis

JEL Classification: D53, G10, G14

I. INTRODUCTION

Dividend is the result of a discretionary decision made by the board of directors of a firm. Generally, a firm announces dividend on the profit. Corporate dividend policy is one of the most enduring issues in modern corporate finance. Dividend policy determines the division of earnings between payments to stockholders and reinvestment in the firm (Weston, Copeland & Shatri: 2004). Miller and Modigliani (1961) have given a theory

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stating that the shareholders should be indifferent between amount distributed and retained in the firm. However, in practice, the assumption of capital market perfection does not exist that lead to the situation where dividend policy is relevant.

Friend and Puckett (1964) studied dividend and stock prices using cross section data to test the effect of dividend payout on share value using regression model. Chawla and Srinivasan (1987) studied the relationships between dividend and share price in the Indian context. The result concluded that the impact of dividends is more pronounced than that of the retained earnings.

Similarly, Kumar and Mohan (1975) concluded that the stock market has started recognizing the impact of retained earnings in Indian stock market. The study of Lintner (1956) revealed that the determinants of changes in dividends are current earnings and the dividends distributed in the past are subject to mitigate the dividend cash flow relationships. Khan (2009) found the evidences that dividends, retained earnings and other determinants have dynamic relationship with market share price. The study suggests that the overall impact of dividends on stock prices is comparatively better that of retained earnings.

There are two different views regarding the dividend policy and stock price. Those who think dividends have more impact in determining share price, argues that shareholder prefers current return rather than future return and dividend distribution is an indicator of earning capacity in future. The other views are based on the importance of retained earnings. They argue that retained earnings are indicator of future investment opportunities. The shareholders can enjoy tax advantages in retained earnings. For tax purpose, retained amount is not treated as income until it is realized.

A number of studies on impact of dividends on stock price have been carried out in different parts of the world particularly in developed countries. Most of the earlier studies show the significant role of dividend policy on stock price. The corporate firms should follow the appropriate dividend policy to maximize the shareholders' value. Dividend policy is considered as one of the important and critical variables affecting the share price. In the context of Nepal, limited studies (such as Pradhan :2003, Manandhar: 1998) have been carried out by research scholars. Still there is a gap in the financial literature concerning the effect of dividends on stock prices particularly in banking and non-banking sectors of Nepal.

The overall objectives of this paper are to observe the impact of dividends on stock price in Nepal. On top of that this paper has been written to determine the relationships of market price per share with related financial indicators such as earnings per share, retained earnings, lagged prices earnings ratio and lagged market price per share.

II. REVIEW OF PREVIOUS STUDIES

After the dividend irrelevance theory proposed by Modigliani and Miller (MM) in 1961, many theories have emerged over the time such as Gordon (1962), Walter (1963), Friend

and Puckett (1964). Some theories supported MM's theory of dividend irrelevance whereas most of the theories opposed.

MM theorized that the dividend policy is irrelevant like in the capital-structure irrelevance proposition with no taxes or bankruptcy costs. This is known as the "dividend-irrelevance theory", indicating that there is no effect from dividends on a company's capital structure or stock price. MM argued that the value of the firm is based on its basic earning power and its business risk, not how it distributes earnings to shareholders.

The dividend preference theory holds that the firm's value will be maximized by a high dividend payout ratio because investors regard cash dividends as being less risky than potential capital gains. Higher payout ratio leads to the increase in firm value and decrease in cost of capital.

The common assumptions this theory is explained below.

- There is a perfect capital market in which all investors behave rationally.
- Corporation tax does not exist therefore there is no differences between tax rates in capital gains and dividends.
- The floatation costs on securities are ignored.
- There is neither a constant dividend policy of firm, which will not change the risk complexion nor the rate of return even in cases where the investments are funded by the retained earnings.

Based on these assumptions and using the process of arbitrage Miller and Modigliani have explained the irrelevance of the dividend policy. Firms have two options for utilization of its profit after tax i.e. (i) to retain the earnings and plough back for investment purposes (ii) distribute the earnings as cash dividends. If the firm selects the second option and declares dividend then it will have to raise capital for financing its investment decisions by selling new shares. Here, the arbitrage process will neutralize the increase in the share value due to the cash dividends by the issue of additional shares. This makes the investor indifferent to the dividend earnings and the capital gains since the share value of the firm depends more on the future earnings of the firm than on its dividend policy. Thus, if there are two firms having similar risk and return profiles the market value of their shares will be similar in spite of different payout ratios.

In line with the dividend irrelevance hypothesis, Black and Scholes (1974) examined the relationships between dividend yield and stock returns in order to identify the effect of dividend policy on share prices. Their results showed that the expected return either on high or low yield stocks are the same. Black and Scholes, therefore, concluded that neither high-yield nor low-yield payout policy of firms seemed to influence stock prices.
Gordon (1962) gave importance to the dividend policy of the firm. Gordon used the dividend capitalization approach to study the effect of the firm's dividend policy on the stock price. Gordon's model is based on the following assumptions:

- No external financing is available for the corporation and retained earnings would be used to finance expansion as well.

- Return on Investment (r) and the cost of equity capital (k_e) remain constant.
- Firm has an infinite life.
- The retention ratio remains constant and hence the growth rate is also constant (g=br).
- k > g i.e., cost of equity capital is greater than the growth rate.

Gordon concluded that dividend policy of a firm affects its value. The conclusion of the study is that investors give more value to the present dividends rather than future capital gain. This argument insisted that an increase in dividend payout ratio leads to an increase in the stock price for the reason that investors consider the dividend yield (D_1/P_0) is less risky than the expected capital gain.

James E. Walter (1963) considers that dividends are relevant and they do affect the share price. He showed the relationship between the internal rate of return (r) and the cost of capital of the firm (k), to give a dividend policy that maximizes the shareholders' wealth. The Walter's model is based on following assumptions

- Retained earnings are the only source of finance available to the firm, with no outside debt or additional equity used.
- r and k are assumed to be constant and thus additional investments made by the firm will not change its risk and return profiles.
- Firm has an infinite life.
- For a given value of the firm, the dividend per share and the earnings per share remain constant.

The model studied the relevance of the dividend policy in three situations: (a) $r > k_e$, (b) $r < k_e$, and (c) $r = k_e$. When the return on investment is greater than its cost of equity capital, the firm can retained the earnings, since it has better and more profitable investment opportunities than the investors. It implies that the return of re-investment of the earnings is higher than what they earn by investing the dividends income. In the second case, the return on investment is less than the cost of equity capital and in such situation the investors will have a better investment opportunity than the firm. This suggests an optimal dividend policy of 100% payout. This policy of a full pay-out ratio will maximize the value of the firm. Finally, when the firm has a rate of return equal to the cost of equity capital, the firms' dividend policy will not affect the value of the firm.

Lintner (1956) presented a view to identifying the determinants of corporate dividend payment practice with the interview of the top managements of 28 firms. The study concluded that corporate management tends to establish target dividend payouts as a proportion of earnings and to set their dividend payments to adjust over time toward the desired fraction of earnings. Establishing a stable dividend hypothesis, Lintner showed the following relation between dividends and earnings:

$$D_t^* = rE_t \quad (1)$$

Where,
D_t^* = dividend payment per share during the period t
r = the payout ratio
E_t = firm's earnings per share during period t.

Lintner then developed his above observation as under:

$$D_t - D_{t-1} = a + c\,(D_t^* - D_{t-1}) \quad (2)$$

Where,
a = constant
c = constant speed of adjustment factor.

However, Lintner further developed the equation to explain the corporate dividends payment practice by adjusting the above observations to obtain a partial adjustment model as follows:

$$D_t = a + b_1E_t + b_2D_{t-1} + E_t \quad (3)$$

Where,
$b_1 = cr$
$b_2 = 1- c$
E_t = error term during period t

Lintner used the above equation to explain the behavior of corporate dividend policy along with other variables explaining the stock prices using aggregate data in most of his tests.

Friend and Puckett (1964) provided the relationships between dividends and stock prices using regression analysis of 110 firms from five industries for the period of 1956 to 1958. The regression results $P_t = a + bD_t + CR_t$ exhibited the strong dividends effect and relatively weak retained earnings effects on three of the five industries, i.e. chemicals, foods and steels. Again, the study tested regression equation by adding lagged earnings price ratio $P_t = a + bD_t + CR_t + d\,(E/P)_{t-1}$. The result showed that more than 80% of the variation in stock prices explained by these three independent variables. Dividends have a predominant influence in stock prices. The study also reveals the dividends and retained earnings coefficients are closer to each other than first set of regression.

Chawla and Srinivasan (1987) carried out a study to identify the impact of dividend and retained earnings on stock price in the Indian context. They attempted to test the dividend retained earnings hypothesis and examine the structural changes in the estimated relations over time. The results indicate that incase of chemical industry both dividends and retained earnings significantly explain the variations in share price. The impact of dividends is more pronounced than that of the retained earnings. But the market has started the shifting towards more weight for retained earnings.
Kumar and Mohan (1975) hypothesized that the market price of share is a function of dividends and retained earnings and used the following regression equation:

$$P_{it} = a + bD_{it} + cR_{it} + e_{it} \quad (4)$$

Where,
P_{it} = price of stock i at time t,
D_{it} = dividend per share of stock i at time t and
R_{it} = retained earnings of stock i at time t.

The estimated coefficients for the two explanatory variables, dividends and retained earnings are more or less equally significant. They argued that the dividends hypothesis

has a little superiority over the retained earnings in determining the share. Consistently, Nishat (1995) attempted to evaluate the relative importance of the dividends vis-à-vis retained earnings hypothesis in determining the share prices. He developed the following model to compare the dividends and retained earnings influence on the share prices in highly profitable growth industries of Pakistan.

$$P_{it} = \alpha_0 + \alpha_1 D_{it} + \alpha_2 R_{it} \quad (5)$$

Where,

P_{it} = price of stock i at time t,

D_{it} = dividend per share of stock i at time t and

R_{it} = retained earnings.

The above model might cause an upward bias in the dividends coefficient due to two major reasons. Firstly, the relationship is misinterpreted as it assumed that the riskiness of the firm is uncorrelated with dividend payout and share prices. This problem should be eliminated by introducing a variable namely lagged P/E ratio to measure individual deviation from the sample average price earnings ratio in the previous year periods as follows:

$$P_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 [P/E]_{i(t-1)} \quad (6)$$

Where,

$P/E_{i(t-1)}$ = price earnings ratio of the previous year

Secondly, the income reported by a corporation in any particular period is subject to short-run economic and accounting factors. If prices were related to normal than reported income, it would produce biased results in favor of dividend payout. However, the difference between the dividends and retained earnings coefficient might be reduced by using the following model.

$$P_{it} = \lambda_0 + \lambda_1 D_{it} + \lambda_2 R_{it} + \lambda_3 P_{i(t-1)} \quad (7)$$

Where,

$P_{i(t-1)}$ = share price of the previous year

Khan (2009) found the evidences that dividends, retained earnings and other determinants have dynamic relationship with market share price in the context of Bangladesh. The study suggests that the overall impact of dividends on stock prices is comparatively better that of retained earnings. The expected dividends play an important role in the determination of stock prices whatever determinants, like lagged price earnings ratio or lagged price, are considered.

Akbar & Baig (2010) considered the sample of 79 companies listed at Karachi Stock Exchange to study the effect of dividend announcement on stock prices for the period of 2004 to 2007. The study shows that the announcement of dividends either cashes dividend or stock dividend or both have positive effect on stock prices. Nazir, Nawaz, Anwar, & Ahmed (2010) also study the effect of dividend policy on stock prices. Results of their study show that dividend payout and dividend yield have significant affect on stock prices while size and leverage have negative insignificant affect and earning and growth have positive significant affect on stock prices.

Hussainey, Mgbame, & Chijoke-Mgbame (2011) studied the impact of dividend policy on stock prices. The study shows the positive relations between dividend yield and stock

price changes and negative relations between dividend payout ratio and stock price changes. Their results further indicate that the firm's earnings, growth rate, level of debt and size also causes the change in stock price of UK.

In context of Nepal, few research works have been conducted in dividends payout. This study has been expected to find a pathway in dividend policy to affect market price per share providing useful information for all financial scholars. Moreover, the earlier studies on dividends need to be updated due to the rapid changes in financial market of Nepal.

Manandhar (1998) studied on dividend policy and value of firm to identify the determinants of dividend policy in the context of Nepal. The study found that dividend per share and return on equity have positive impact on market capitalization while earning per share, price-earnings ratio, and dividend yield have negative impact. It was also found a positive relationship between dividends and market capitalization.

Pradhan (2003) also carried out a study to determine the relative importance of dividend and retained earnings in determining the market price of stock. He found that dividend payment is more important as opposed to retained earnings in Nepal. The results revealed the customary strong dividends effect and a very weak retained earning effect indicating the attractiveness of dividends among Nepalese investors. The findings suggest that Nepalese stock market has not started recognizing the impact of retained earnings.

Chhetri (2008) has explained that there are differences in financial position of high dividend paying and low dividend paying companies. The study revealed that there is a positive relationship between dividends and stock prices. Further, the coefficient of dividends is higher as compared to the coefficient of retained earnings.

The empirical findings of dividend researches have produced mixed results. Some found positive relationship between the dividend theories and the corporate dividend policy, while others did not. The theories on behavior of corporate dividend policy suggest that dividend policy is a residual decision. The price reactions to dividend changes are stronger for high dividend-yields stock. Similarly, evidences are found on the existence of dividend signaling effects. The initiation and increase in dividends has a significant positive impact on stock price.
From the above studies, it is obvious that studies were more concerned with impact of dividends on stock price and dividend policy. The findings of these studies are not unanimous across all sectors and time periods for explanatory variables and its impact on stock price. The reason behind this is the difference in methodology, sample size, and time. However, studies found that the dividend has a significant impact on market stock prices than other explanatory variables.

III. SOURCES OF DATA AND NATURE OF STUDY

This study is based on secondary data obtained from published annual reports of sample firms. The secondary data has been collected from listed companies in Nepal stock exchange (NEPSE). The sample includes banking and non-banking firms of Nepal. It

includes the balance sheet, income statement and cash flow statement of sample banking and non-banking company listed in NEPSE. All listed companies are required to submit their annual report including audited financial statement within specific period as prescribed by the Security Exchange Act and Regulation in Nepal. Corporate firms are categorized in different industries such as commercial banks, development banks, finance companies, insurance companies, hydropower, manufacturing and processing industries, trading, hotels and others. Among these industry, commercial banks, development banks and finance companies are considered as banking sector and rest of the industries are considered as non-banking sectors. Several companies' shares are traded actively in stock market of Nepal.

Table 1: Sample banking and non-banking firms

Industry	Population (as per listed in NEPSE)	Sample Firms
Commercial bank	24	22
Development bank	61	34
Finance company	71	61
Hotel	4	4
Manufacturing and processing	18	14
Hydropower	4	4
Insurance	21	19
Trading Company	3	3
Others	4	2

The total population of the study is 210 companies which are listed in Nepal Stock Exchange for fiscal year 2010/11. Though there are 210 companies listed in Nepal Stock Exchange Ltd., all are of them are not provide scope for this study. On the other hand, many of them are new and have begun their operation. Therefore, out of 210 companies 163 have been selected for the study on the basis of accessibility of data which includes 117 companies from banking sector and 46 from non-banking sector. The higher number of sampled firms from banking sector is selected for the study due to the large number of listed companies are from banking sector in NEPSE.

IV. SPECIFICATION OF THE MODEL

Apparently the studies conducted by Miller and Modigliani (1961), Friend and Puckett's (1964) and Chawla and Srinivasan (1987) have influenced this paper. The Friend and Puckett's (1964) model can be taken as the key elements for determining the relationships of market price per share with concerned financial indicators such as retained earnings, lagged price earnings ratio and lagged market price per share in this study.

The hypothetical statements of the model is that the price of a share depends on dividends, retained earnings, earning per share, lagged price earnings ratio and lagged market price of share. This theoretical statement could be framed as:

In equation

$$P_{it} = a + b_1 D_{it} + b_2 R_{it} + e_{it} \quad (8)$$

Where,
P_{it} = Price of share in time't'
D_{it} = Dividend per share in time't'
R_{it} = Retained earnings per share in time't'
e_{it} = Error term

Modifying the above equation, this study uses lagged price earning multiplier (price earnings ratio). The modified equation for the study is:

$$P_{it} = a + b_1 D_{it} + b_2 R_{it} + b_3 P/E_{i(t-1)} + e_{it} \quad (9)$$

Where,
$P/E_{i(t-1)}$ = Lagged price earnings ratio in time't-1'
It is expected that the coefficient of both dividends and retained earnings should be positive in the price equation. The variable $P/E_{i(t-1)}$ is added to keep the firm effect constant.

Again, this research uses lagged market price instead of lagged P/E ratio and developed the following model.

$$P_{it} = a + b_1 D_{it} + b_2 R_{it} + b_3 P_{i(t-1)} + e_{it} \quad (10)$$

Where,
$P_{i(t-1)}$ = Lagged market price in time't-1'
The market price is considered as ending of each fiscal year.

V. EMPIRICAL ANALYSIS

Descriptive Statistics

In this study, descriptive statistics includes the information of dividend per share, retained earnings per share, market price per share lagged P/E ratios and lagged market price per share of each sample firms for the period of 2005 to 2010 which has been presented in pie-chart and bar diagrams.

With the help of descriptive analysis, the classification of sample firms and comparison of sample firms based on sector is presented. The mean value of sample firms under sector is computed to make comparison of sectors. The mean value gives the result of the average of each sector. The descriptive statistics are supported by bar diagram and pie-chart describing the related variable i.e. EPS, MPS, DPS, REPS etc.

Table 2: Classification of sample firms based on banking and non-banking sector

Institution	Population (as per listed in NEPSE)	Sample Firms	Observations
Banking sector	156	117	424
Non-banking sector	54	46	146
Total	**210**	**163**	**570**

The above table shows that out of 210 listed firms in NEPSE, 163 firms have been selected for the study on the basis of accessibility of data. Among them, the banking firms include 117 firms and 46 non-banking firms. The table reveals that the sample firms include 72% from banking sector and 28% from non-banking sector. The study focused on the dividends impact on stock price of banking and non-banking sector. The comparative descriptive statistics of these firms and their analysis are as follows:

Figure 1: Comparative Analysis

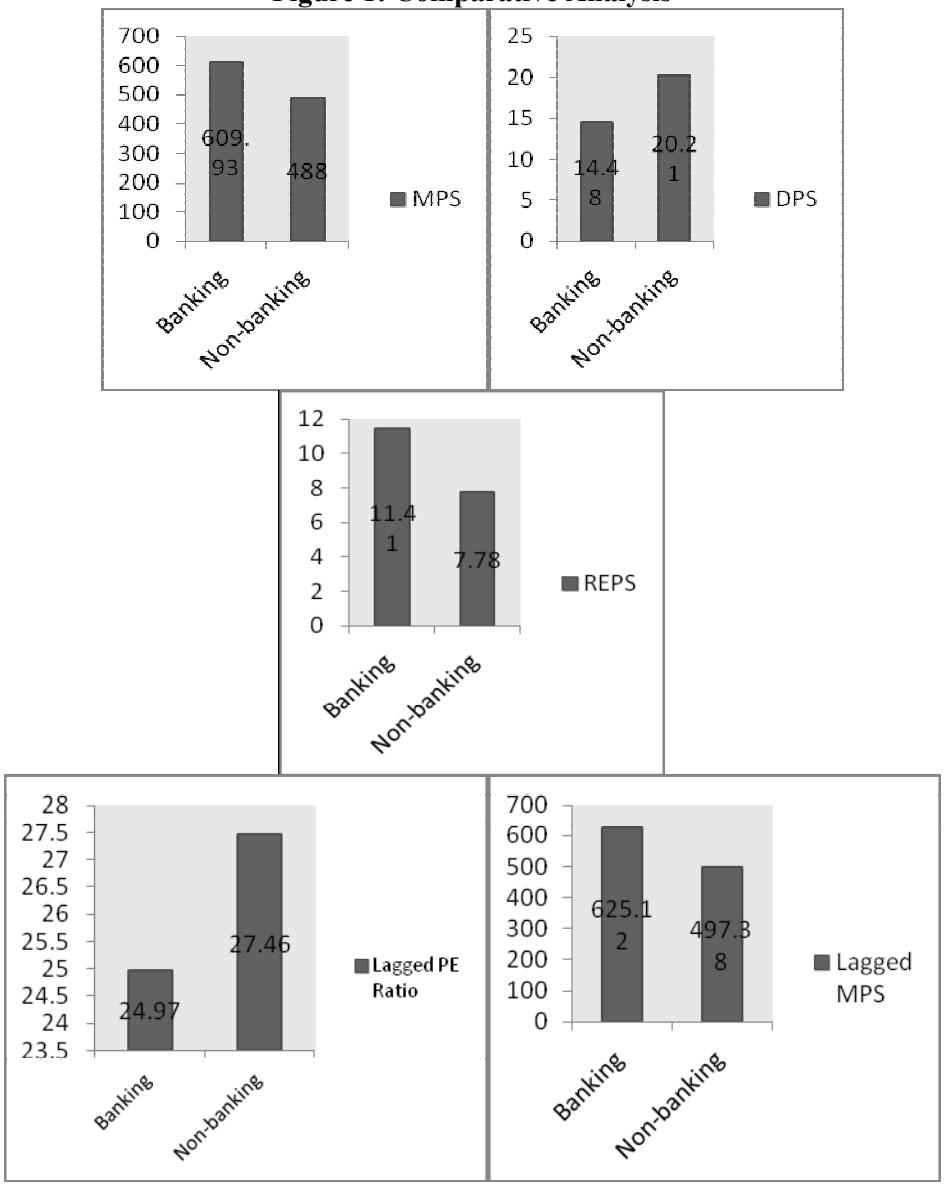

Figure-1 shows the comparative analysis of banking and non-banking sector in which the mean, DPS, and lagged P/E ratio is higher in non-banking sector. However, mean value of MPS, REPS, and lagged MPS is higher in banking sector.

Regression Analysis

A number of studies have noted that increase in dividends lead to share price appreciation. It is generally held that the share price depends upon the expectation of future profit. For sector-wise regression analysis this study mainly considers two sectors i.e. banking and non- banking sector. It is not to choose conclusive between linear and logarithmic results on statistical basis. The logarithmic reduces the problem of regression weight. The linear regressions, unlike the logarithmic relation, can handle satisfactorily very small and negative retained earnings (Friends and Puckett, 1964). Thus, the liner regression has been considered for the study.

1. Impact of Dividends and Retained Earnings on Stock Price

The regression results having two independent variables are presented as in the table below. It presents the multiple linear relationships between stock price, dividends and retained earrings.

Table 3: Regression of stock price on dividends and retained earnings

$$P_{it} = a + b_1D_{it} + b_2R_{it} + e_{it}$$

(P_{it},D_{it} and R_{it} represents market price per share , dividend per share and retained earnings per share respectively. The sign * and ** denote the significance of coefficient at 5% and 1% level of significance)

Sector (Observations)	Regression coefficient					
	a	b_1	b_2	R^2	SEE	F
Total Sector (n=554) 'p' value	341.78 (0.000**)	12.51 (0.000**)	3.04 (0.000**)	0.335	652.80	139.19 (0.000**)
Banking Sector (n=411) 'p' value	218.00 (0.000**)	22.68 (0.000**)	5.03 (0.000**)	0.365	650.67	117.33 (0.000**)
Non-banking sector (n=143) 'p' value	282.38 (0.000**)	9.15 (0.000**)	2.36 (0.000**)	0.588	484.19	100.78 (0.000**)

The result explain that one rupee increase in dividends leads to the 12.51, 22.68 and 9.15 rupees increase in market share price in total, banking and non-banking sector respectively. The result depicted that the coefficient of dividends and retained earnings is significant in banking, non-banking and total sector at 1% level of significance. The outcome of the regression analysis implies that there is a direct relationship between dividends and retained earnings with market share price in both sectors which is expected sign as previous studies. The important point to be noted here is that the F-statistics for the regression model is significant at 1% level of significance indicating that the regression equation provides statistically significant explanation of variation in the market share price of banking and non-banking sector. Regarding the regression model, $P_{it} = a + b_1D_{it} + b_2R_{it} + e_{it}$, coefficient of dividends is higher as compare to the coefficient of retained earnings in total, banking and non-banking sector as well. The result indicates that there is a strong positive relationship between dividends and share price. Further,

dividend has a predominant impact on stock prices in both banking and non-banking sector.

2. Impact of Dividends, Retained Earnings and Lagged P/E Ratio on Stock Price

As past earning shows the track of the company, these earning may benchmark for the investor to decides whether to hold or buy the share of the company at the prevailing price. It may now be practical to see the results of regression models by incorporating the lagged price earnings ratio as one of the more independent variable in the above mentioned equation. The table below presents the regression results of stock price on dividends, retained earnings and lagged price earnings ratio.

Table 4: Regression of stock price on dividends, retained earnings, and lagged price earnings ratio

$$P_{it} = a + b_1 D_{it} + b_2 R_{it} + b_3 P/E_{i(t-1)} + e_{it}$$

(P_{it}, D_{it}, R_{it} and $P/E_{i(t-1)}$ represents market price per share , dividend per share , retained earnings per share and lagged price earnings ratio respectively. The sign * and ** denote the significance of coefficient at 5% and 1% level of significance)

Sector (Observations)	Regression coefficient						
	a	b_1	b_2	b_3	R^2	SEE	F
Total Sector (n=383) 'p' value	344.07 (0.000**)	15.05 (0.000**)	2.27 (0.003**)	1.85 (0.001**)	0.397	705.40	83.51 (0.000**)
Banking Sector (n=289) 'p' value	104.99 (0.075)	27.23 (0.000**)	5.17 (0.001**)	4.94 (0.000**)	0.67	672.19	83.51 (0.000**)
Non-Banking Sector (n=94) 'p' value	288.05 (0.000**)	10.87 (0.000**)	1.79 (0.005**)	0.93 (0.053)	0.662	512.81	59.35 (0.000**)

The outcome presented in above table shows that the estimated coefficient has expected positive sign for dividends, retained earnings and lagged price earnings ratio in total, banking and non-banking sector. The result shows the strong dividends effect indicating attractiveness of dividends among Nepalese investors. In the case of total sector, the coefficient of dividend is 15.05, which signify that one rupee change in dividend leads to 15.05 rupees changes in market price per share. In the case of banking sector, the coefficient of dividend is 27.23, which indicates that one rupee increase in dividend leads to 27.23 rupees increases in market price per share. Similarly, in case of non-banking sector, coefficient of dividend is 10.87, which indicates that one rupee increase in dividend leads to 10.87 rupees increase in market price per share. The coefficient is statistically significant in total, banking and non-banking sector at 1% level of significance. In case of retained earnings, the sign of coefficient is positive as expected for total sector. The coefficient of retained earnings is 2.27, 5.17 and 1.79 in total, banking and non-banking sector respectively.

The retained earning coefficient is also significant in all categories at 1% level of significance. In addition, the dividend has greater impact than the retained earnings on stock price. The F-statistics for the regression model is significant at 1% level of significance indicating that the regression equation provides statically significant explanation of variation in the stock price of all categories i.e. total, banking and non-banking sector.

A lagged price earnings ratio is significant in total and banking sector at 1% level of significance however it is not significant in non-banking sector at 5% level of significance. There is a positive relationship between price and lagged price earnings ratio in total, banking and non-banking sector. The study consider the regression model, $P_{it} = a + b_1 D_{it} + b_2 R_{it} + b_3 P/E_{i(t-1)} + e_{it}$ where the result shows that the coefficient of dividends is higher than that of the coefficient of retained earnings in all sectors. There is a positive relationship between dividend and stock price. The dividend has a greater impact on stock prices in both banking and non-banking sector.

3. Impact of Dividends, Retained Earnings and Lagged Market Price on Stock Price

As in the past, market price shows the pathway of the company, these earning may benchmark for the investor to decide whether to invest or not at the prevailing price. It may now be practical to see the results of regression models by incorporating the lagged market price instead of lagged P/E ratio. Table-5 presents the regression results of stock price on dividends, retained earnings and lagged market price.

Table 5: Regression of stock price on dividends, retained earnings and lagged market price

$$P_{it} = a + b_1 D_{it} + b_2 R_{it} + b_4 P_{i(t-1)} + e_{it}$$

(P_{it}, D_{it}, R_{it}, and $P_{i(t-1)}$ represents market price per share, dividend per share, retained earnings per share and lagged market price per share respectively. The sign * and ** denote the significance of coefficient at 5% and 1% level of significance)

Sector (Observations)	Regression coefficient						
	a	b_1	b_2	b_3	R^2	SEE	F
Total (n=382) 'p' value	102.64 (0.000**)	5.35 (0.000**)	0.65 (0.111)	0.84 (0.000**)	0.829	374.89	618.74 (0.000**)
Banking (n=288) 'p' value	46.31 (0.131)	12.10 (0.000**)	1.37 (0.116)	0.77 (0.000**)	0.829	380.61	462.55 (0.000**)
Non-Banking (n=93) 'p' value	49.36 (0.083)	2.10 (0.000*)	0.62 (0.030*)	0.97 (0.000**)	0.934	225.85	433.11 (0.000**)

The outcome presented in above table-5 shows; the coefficient of dividend is 5.35 in total sector, which signify that one rupee change in dividend leads to 5.35 rupees change in market price per share. In the case of banking sector, the coefficient of dividend is 12.10, which indicates that one rupee increase in dividend leads to 12.10 rupees increases in price per share. Similarly, in case of non-banking sector, coefficient of dividend is 2.10, which indicates that one rupee increase in dividend leads to 2.10 rupees increase in market price per share. The coefficient is statistically significant and the sign of coefficient is positive as expected for total, banking and non-banking sector at 1% level of significance. (First estimate regressions using total sample and then classify the total sample into different sub-samples).

In the case of retained earnings, the sign of coefficient is positive as expected for all sectors. The coefficient of retained earnings is 0.65, 1.37 and 0.62 in total, banking and non-banking sector respectively. The retained earning coefficient is also significant in non-banking sector at 5% level of significance however it is not significant in total and banking sector at same level of significance.

In case of lagged market price, the sign of coefficient is positive as expected for all sector. The coefficient of lagged market price is 0.84, 0.77 and 97 in total, banking and non-banking sector respectively and the coefficient is significant for all sectors at 1% level of significance.

The F-statistics for the regression model is significant at 1% level of significance indicating that the regression equation provides a statistically significant explanation of variation in the market share price of total, banking and non-banking sector.
As consider in the regression model, $P_{it} = a + b_1D_{it} + b_2R_{it} + b_3P_{i(t-1)} + e_{it}$, the coefficient of dividends is higher than the coefficient of other variables in all sectors. The dividend has a strong impact on market stock prices in both banking and non-banking sector. The overall result shows that the value of R^2 is increased when explanatory variable lagged market price is substitute for lagged P/E ratio. The result is consistent with the study of Pradhan (2003) and Chawla and Srinivasan (1987).

VI. CONCLUSION

After having observed the impact of dividends on stock price of Nepalese stock market, it is found that DPS is a motivating factor in the Nepalese financial sector which is strong enough to increase market price per share of the banking and non-banking firms. Comparatively, it is also found that the effect of DPS greater than REPS on the impact of market price per share. Lagged market price per share is an accelerator to increase market price per share in subsequent years. Finally, the study shows that dividends and retained earnings significantly explain the variations in share price in both banking and non-banking sectors. The impact of dividend, however, is much more pronounced than that of the retained earnings. The relation of dividends and retained earnings on share price is positive in all cases.

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