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# Effect of Dividend on Stock Price: An Indian Perspective

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## ABSTRACT

This paper aims to find out the effect of dividend on share price in India. For this purpose, the researchers collected data from a sample of 50 firms of the NIFTY-50 index from 2008-2018. Independent variables were dividend per share and retention ratio. Control variables were return on equity, profit after tax, and earnings per share. Panel regression methods like the pooled OLS regression, fixed-effect model, and random effect model were applied. The results supported the fixed-effect model. The findings confirm the hypotheses that dividend per share and retention ratio have no significant impact on share price, which further affirms Miller and Modigliani's theory stating that share prices are unaffected by dividend payments by a firm. However, the result shows that earnings per share and return on equity have a significant impact on share price, attributing to the viewpoint that companies which are effective in utilizing capital invested by shareholders and make a profit for them are valued high.

**Keywords:** dividends, earnings per share, return on equity, panel regression, NIFTY-50.

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## INTRODUCTION

The practice pursued by management in making dividend payout decisions is referred to as dividend policy. It implies the quantum and pattern of cash distribution over time to shareholders (Lease et al.2000). It determines the division of earnings between payment to shareholders and reinvestment in the firm (Njonge, 2012). Pandey (2010) outlined four types of dividend policy, namely constant payout ratio, constant dividend per share, constant dividend per share plus extra depending on profits, and lastly residual dividend policy in which dividends are paid in the absence of investment opportunities. The dividend policy is a choice of financial strategy of the firm. Several factors influence it, like the source of financing, investment opportunities, floatation costs, government policies, taxation, and earnings of the company (Pani, 2008).

Dividend policy is a guideline for the company to pay dividends, which acts as one of the important financial indicators of a company (Friend and Puckett, 1964). A dividend is considered a major component of the return to shareholders apart from long term capital gain. Dividend payment attracting investors helps to soak the price of the stock at a certain level (Balke and Wohar, 2006). The stock price can be seen in the capital market segment and denotes the selling price of a single share of outstanding shares of a company. The movement of stock prices is observed by all investors, either retail or institutional. Share prices are the most pivotal indicators to decide whether or not to invest in a particular scrip (Gitman et al., 2013). Dividend policy is also one of the critical corporate decisions to be taken by a company because it delineates the future prospects of a company. It signifies that the company is following good corporate governance practices. This manifests that the company can fetch funds from the market at lucrative terms (Michaely and Roberts, 2012).

The Indian capital market has undergone a drastic change from a closed economy of the 1980s to a liberalized economy from the 1990s. The Securities and Exchange Board of India (SEBI) has been given more regulatory power for governing capital markets, which has led to an increase in capital market activity markedly. Consequently, corporates have to frame a worthwhile dividend policy to attract investors who have multiple investment options post-liberalization periods (Mohanty, 1999). Only

substantially profitable companies display a consistent dividend history as they are issued from retained earnings. So, dividends are also seen as a symbol of the company's success. Shares of such companies are popular among investors reinforcing the belief that the stock is strong (Sajid et al. 2012). Whether dividend policy affects stock price has been an issue of debate amongst academicians, researchers, and investors.

## **THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT**

Miller and Modigliani (1961) proposed the Dividend Irrelevance Theorem drawing two main conclusions. They inferred that firm value is dependent on free cash flows occurring in a current and future period. Secondly, firms maximize their values through investment, thus making dividend policy ineffective. Dividend policy may impact the timings and magnitude of dividend payments, but it does not alter the present value of the total stream of dividends. If a company retains all its earnings rather than giving any dividends, the shareholder enjoys capital appreciation equal to the amount of earnings retained (Midani, 1991). On the contrary, if a company chooses to pay dividends, shareholders will get dividends equal to the amount by which their capital would have appreciated in value provided, the company chooses to hold its earnings. Hence from the viewpoint of shareholders, the division of profits between retained earnings and dividends are not pertinent (Aharony and Swary, 1980). This theory also makes an assumption of the perfect capital market wherein any of the participants cannot influence share prices significantly as their number is not big enough to do so, and there are no taxes, transaction costs, or asymmetric information (Ahsan, 2012). The value of the firm is decided by the monetary return generating ability of assets and its investment policy. Each stock is priced based on the rate of return and capital gains. Thus dividend and share prices have no significant relationship (Mishra and Narender, 1996).

Another viewpoint is that if the dividend announced is equal to what the market expects from a company, then there would be no variation in share price. If the dividend distributed by a company is higher than the previous dividend, and the market is also expecting a higher dividend from the company, then its share price would be discounted by the market

because this higher expectation has already been captured in the market price of the stock (Muth, 1961).

Based on the above study, we formulated the first hypothesis of study as:

H<sub>1</sub>: Dividend per share does not significantly affect the stock price.

Contrary to the above viewpoint, other research hypothesized that dividends affect stock prices. The Bird in Hand Theory implies that the value of the company and the price of its shares are positively related to and determined by dividend payout. According to this theory, the share price is ascertained by its intrinsic value. The share value of a firm is a sum of the present value of expected future net cash inflows by way of dividends received and the present value of its selling price. In totality, it is assessed by the amount of monetary value it generates (Tanushev, 2016). Gordon (1963) also supported this theory by deducing that the company's cost of capital or stock price is not independent of the rate of dividends. The fair value of a stock is equal to stock dividend per share, and the dividend of the firm grows at a constant rate, and an increase in dividend rate incites an increase in stock value of the firm.

James Walter (1963) proffered the relevance of dividends and their bearing on a firm's share prices. In his model, he stated that dividend policy and investment policy are interlinked. The value of the firm is governed by choice of its dividend policy. Investors prefer investing in a company which provides dividends rather than capital gain. They prefer cash generated by dividend income instead of liquidating the shares to realize returns by capital growth. They choose the certainty of dividends over the uncertainty of share prices. This school of thought supports the conclusions of Linter (1956), averring that investors always prefer dividends because of the time value of money. If the current dividend is withheld to retain profit, and there is an uncertainty of dividend payment in the future, then in such conditions, investors avoid uncertainty. They would rather pay a higher price for shares on which current dividends are paid. Thus either nonpayment of dividends or payment of low dividends would lower the value of shares. Differing with this outlook, Litzenberger and Ramaswamy (1979), in their Tax Preference Theory, state that investors prefer low pay-out companies to avoid taxation. They assume that investors are charged on dividends with a greater tax

compared to that in capital gains. Taxes are levied upon investors in the year when they receive dividends, and investors pay capital gain tax when they sell the shares. As a result effective capital cost is higher on dividend paid presently than that of capital gain in the future. Jain (2007) insisted that this notion also depends on individual investors. His study shows that retail investors prefer dividend-paying firms, whereas institutional investors prefer non-paying firms. The stock prices reflect investor beliefs, which are rational expectations of future economic gain. The market participants use dividend announcement to vet earnings of a company. Miller and Rock (1985) threw light on dividend policy under asymmetric information in the Signaling Theory of Dividends. They developed a model in which dividend announcement provides information about a firm's current earnings. This dividend announcement effect is caused due to asymmetry of information between owners and managers as corporate accounting earnings measured in real terms follow a regular stationary stochastic process (Le Roy Porter, 1981).

Baskin (1989) concluded that volatility in share prices is notably correlated with dividend yield. He gave four concepts relating to this notion with reference to American markets. They are the rate of return effect, information effect, arbitrage pricing effect, and duration effect. The rate of return effect manifests that a firm with low present dividend payout and dividend yield will have more value in the future because of the expectations by investors arising from future estimations given by the firm, i.e., the estimated rate of return will affect share prices. The information effect illustrates that managers can reduce share price volatility, which is caused due to information asymmetry between shareholders and managers. Arbitrage realization effect concurs with the fact that there is material inefficiency in the capital market, and share price adjusts itself to its intrinsic value. The duration effect denotes that more near term cash flows will be generated from companies with a higher dividend yield. Thus high dividend-yielding stocks will take a shorter duration to produce expected cash flows provided the company has a stable dividend policy. So it will be less influenced by the change in discount rates. Fama (1998) advocated modern corporate finance theory, which asseverates that the prime goal of a firm is the creation and maximization of its value. The value of the firm is represented by an aggregate of its equity and debt. It is the total price that a firm commands in the market. Thus the criteria for making financial

decisions by the firm are steered towards maximizing the total value of the firm. This theory highlights the importance of corporate financing decisions on a firm's value in the market.

Based on the above we formulated the second hypothesis of the study as:

H<sub>2</sub>: Retention Ratio does not significantly affect the stock price.

## **Survey-based Evidence**

Allen and Rachim (1996) analyzed 173 Australian listed companies for the period 1972 to 1985. They found no correlation between volatility in stock prices and dividend yield while performing multiple regression after controlling variables like firm size, earnings, leverage, and growth. There is a strong positive correlation between stock price volatility and earnings of the firm and leverage. Also, there is a significant negative correlation between stock price volatility and the payout ratio. Rashid and Rahman (2008) conducted a similar study in Bangladesh. The result showed that dividend policy does not exert influence on share price volatility. It cannot be used to signal information to investors as shares of listed companies are not widely held, and they remain concentrated in the hands of dominant shareholders; therefore, dividend payment may not be used to judge the decision of manager over free cash flow. Chauhan et al. (2019) found a low positive relationship between dividend payout ratio and price-earnings ratios in Indian information technology companies listed in the Bombay Stock Exchange. Nautiyal and Kavidayal (2018) analyzed institutional factors affecting share prices from a sample of 30 companies listed in the nifty-50 index for the period 1995-2014. They deducted that dividend per share and earnings per share display poor explanation of share price volatility. Companies are required to have strong fundamentals to be lucrative for investors.

Contradicting the above findings, Nishat and Irfan (2003) found out that both dividend yield and payout ratio pose a significant impact on share price volatility. They examined 160 listed companies in the Karachi Stock Exchange from 1981 to 2000. Cross-sectional regression analysis was performed in the study, keeping control variables like the size of the firm, asset growth, and leverage, and earnings volatility. Pani (2008) explored the



relationship between dividend policy and stock price behavior in India. He studied 500 BSE listed companies from 1996-2006. Panel data regression models were employed to analyze the link between dividend retention ratio and share price using long term debt, size, and equity of a firm as control variables. The result confirmed that changes in returns from stocks could be elucidated by dividend retention ratio. They are also altered by the size of the firm and debt-equity ratio.

Hussainey et al. (2011) examined the relationship between share price and dividend policy in the United Kingdom. Findings depict that stock price and dividend yield have a positive relationship, while dividend payout ratio and share price show a negative relationship. The share price also depends on the firm's debt level, growth rate, earnings, and size. Gill and Biger (2012) examined 333 American firms listed in NYSE for the period 2009-2011 deducing that dividend per share has a positive impact on equity share prices of American firms.

Chavali and Nusratunnisa (2013) examined the reverberation of dividends on share prices in India. Market Model Event Study Methodology was employed to compute the effect of dividend announcements on share prices by taking a 41-day event window. They collected stock price data on the date of announcement of the dividend and also twenty days before and after this date from 67 fast-moving consumer goods companies for the period April 2007 to August 2011. The outcome suggests that the market has positively reacted to dividend announcements with significantly positive average abnormal returns (AAR) around the announcement date. Venugopal and Jampala (2019) used Vector Error Correction Model (VECM) to measure the short-run and long-run relationship between equity market price and dividend yield and a payout ratio of selected pharmaceutical companies in India listed in BSE for period 2008 to 2018. The study revealed that the dividend payout ratio has a significant impact on share prices. Kumarswamy et al. (2019) analyzed 116 textile companies listed in BSE. The study period was from 2008-2017. The results showed that investors prefer dividends over retained earnings because of the volatile nature of the stock market. The dividend acted as a signal for the prospective performance of the company in the future, thus creating significant variations in share prices. Similar results were obtained by Singh and Tandon (2019) while studying Nifty-50 companies for the period 2008-2017. Non-payment or decrease in dividend

payment may relay a doubtful signal about the profitability of the company (Lintner, 1962). There is a positive and inclusive relationship between stock price and dividend per share. A firm has to consistently improve its financial performance to enable an accordant increase in dividend per share. This will help in maintaining the market value of the firm at an optimum level (Araoye et al., 2019).

## **DATA AND RESEARCH DESIGN**

### **Sample Selection**

Data was taken from the Prowess database of CMIE (Centre for Monitoring Indian economy). A sample of 50 firms listed in the NIFTY-50 index were selected for empirical analysis. The study period taken was from 2008 to 2018. The NIFTY-50 index has 50 companies from all the major sectors of the Indian economy and represented most liquid and largest blue-chip companies of the National Stock Exchange. The NIFTY-50 shares represented about 65 percent of the total float-adjusted market capitalization of the National Stock Exchange and are perceived to depict a true reflection of the Indian share market.

### **Regression Variables**

The study aimed to find whether dividend affects stock price. The independent variables taken in the study were dividend per share and retention ratio. Control variables were return on equity, profit after tax, and earnings per share. Share price was the dependent variable.

Dividend per share (DPS): It is defined as the total share dividend divided by the number of shares outstanding. The amount and timing of dividend payments are decided by the dividend policy of the firm. This policy decides the proportion of earnings to be distributed as dividends and rest kept for future investments as retained earnings. A company distributes dividends to reward its shareholders and also to lure new potential investors into purchasing its shares at greater prices (Kandpal and Kavidayal, 2015). Yu Qiao and Chen(2001) concluded that share price variance could be explained by dividends and mix dividend policies of the firm, but the market was not found sensitive to cash dividends.

Retention Ratio (RR): It is the percentage of the income of a firm which is not distributed as dividend and is kept as retained earnings. The retained earnings are a major source of finance for companies as they are internally generated funds. The level of retained earnings is governed by the growth rate of companies. Companies with low investment opportunities prefer to distribute their earnings in the form of a dividend (Thirumalaisamy, 2013). Retained earnings come back to the investor in the form of dividends or capital gains ultimately (Beeler and Campbell, 2012).

Profit after Tax: It is the net amount generated by a business after operating expenses, interests, and taxes are deducted from gross profit. This figure assesses what the business is actually earning. It signifies how well a company controls its cost. A higher after-tax profit margin shows that the company is running efficiently and providing more value in the form of profits to shareholders (Phelps, 1986). Alawneh (2018) studied the impact of profit after tax on the share price in the Amman Stock Exchange during the period 1978-2016. His analysis showed that there is a significant relationship between profit after tax and market capitalization of listed companies.

Earnings per Share (EPS): It represents the profit that is gained per ordinary share by an equity shareholder. It determines a company's profitability per unit of shareholder ownership. A continually growing EPS means that investors are getting a share of the company's profit consistently, which betokens that the company is creating value for its shareholders. A declining or negative EPS shows that the company is in financial trouble or suffering from low profitability, thus eroding shareholder value. Shabani et al. (2013) found a strong relationship between earnings per share and stock price of the company. However, Islam et al. (2014) revealed that share price does not move as fast as the EPS moves because the stock price movement depends on micro and macro-economic factors as well.

Return on Equity (ROE): It is calculated by dividing the company's profit after tax by shareholder's equity. It is the amount of net income returned as a percentage of shareholder's equity. It indicates the level of performance of the company. ROE assesses the amount a company makes through investment by shareholders. Portfolio-based on return on equity can generate positive abnormal returns, although higher ROE does not guarantee higher returns from security (Ahsan (2012).

Stock Price: The closing price of shares listed in the NIFTY- 50 index was considered as stock price in this study. The share price behavior can be explained by the Fundamental Theory and the Technical Theory. According to Fundamental Theory, at any point in time, the share of the company is influenced by company-specific factors, industry-relevant information, and macro-economic factors. The intrinsic value of a share is derived based on these factors. In relation to its intrinsic value, a stock may be overpriced or underpriced. The prices of over-priced shares will fall when their true value is known to the market. Contrarily the prices of underpriced shares will go upward as they will be purchased soon (King, 1966). The technical theory postulates that stock prices are determined by market forces, i.e., forces of demand and supply of shares. These demand and supply forces are governed by many rational and irrational factors (Jenson and Benington, 1970).

## RESEARCH METHODOLOGY

### Model

This study included multiple regression analyses wherein share price (Y), which was the dependent variable, was regressed against dividend per share (DPS) and retention ratio (RR), which were independent variables. The study also considered three control variables, namely profit after tax (PAT), earnings per share (EPS), and return on equity (ROE), as they are supposed to influence share prices of the company. The following multiple regression equation was developed for this study:

$$Y_{it} = \alpha_i + \beta_1 \text{DPS}_{it} + \beta_2 \text{RR}_{it} + \beta_3 \text{PAT}_{it} + \beta_4 \text{EPS}_{it} + \beta_5 \text{ROE}_{it} + \mu_{it}$$

Where:

$\alpha_i$  (i=1...n) = unknown intercept of each entity

$\mu_{it}$  = Error term in equation

i = ith company

t= time period

### Panel Data

The data collected for this research was Panel in nature. Panel data refers to a sample of the same cross-sectional units observed at multiple

points in time. It has two dimensions, namely, spatial and temporal. It is tested by using pooled OLS model, fixed-effect model, and random effect model of regression analysis, which depend on the assumption of the error component in the panel data model.

In the pooled OLS regression model, it is assumed that individual cross-sectional or time-specific effects do not exist. The fixed-effect model examines the relationship between explanatory variables and explained variables within an entity. It exploits within-group variation over time. This model does not consider time-invariant characteristics. The limitation of this model is that the variables which have little within-group variation cannot be assessed. The random effect model includes time-invariant variables as well.

Initially, researchers applied all the three tests. Whether the results of pooled OLS, fixed-effect, or random effect to be focused depends on poolability test viz. Breusch and Pagan Lagrangian Multiplier Test, F- test. The Hausman test is considered for choosing between the random effect model and fixed effect model. If the p-value in the Hausman test comes out to be less than 0.05, then we accept the fixed-effect model or else the random effect model is discussed.

## **EMPIRICAL EVIDENCE**

Firstly, heteroscedasticity was tested using the Breusch-Pagan test. The p-value was less than 0.05. So, the null hypothesis of the constant variance was rejected. The data was found to be heteroscedastic. To reduce the effect of heteroscedasticity, we transformed the variables into their logs. In the next step, pooled the OLS regression was conducted, and then regression using the Robust standard errors was also been done to assess the results better as the data was heteroscedastic in nature. In both methods, the coefficient and R-square value remained the same.

**Table 1: Results of Pooled OLS Regression**

Variable	Coefficient	Std.Error	t value	P value	R square	F Value
DPS	-0.03	0.03	-0.11	0.91	67.5	186.43
RR	-0.10	0.08	-1.26	0.21		
PAT	-0.02	0.05	-0.51	0.60		
EPS	0.82	0.04	19.33	0.00		
ROE	0.96	0.05	-2.07	0.03		

**Table 2: Results of Pooled OLS Regression using Robust Errors**

Variable	Coefficient	Robust Std. Error	t value	P value	R square	F Value
DPS	-0.00	0.02	-0.12	0.90	0.675	141.59
RR	-0.10	0.07	-1.32	0.18		
PAT	-0.02	0.05	-0.45	0.65		
EPS	0.82	0.04	17.69	0.00		
ROE	0.09	0.05	-1.83	0.06		

Table 1 and 2 show that only EPS showed significant results with a coefficient of 0.82, implying that with every one percent increase in EPS, the stock price increases by 0.82 percent. The R-square value was 0.67, indicating 67 percent of the variance in dependent variable is due to independent variables here which is similar to the work of Ahmadi (2017) about Tunisian firms. The F value was also statistically significant.

**Table 3: Results of Fixed Effect Model**

Variable	Coefficient	Std. Error	t value	P value	R square	F Value	Poolability test F value at p=0.00	rho
DPS	0.04	0.02	1.94	0.05	0.7064	191.48	17.55	0.80
RR	-0.08	0.06	-1.26	0.20				
PAT	-0.05	0.04	-1.30	0.19				
EPS	0.82	0.03	21.96	0.00				
ROE	0.30	0.04	6.84	0.00				

The Xtset command was run on stata, and the data was declared as panel data. Fixed effect regression results as in Table 3 show that earnings per share (EPS) and return on equity (ROE) exerted a significant influence on the share price as the p-value of these two variables was 0.00. The coefficient of earnings per share was highly significant, with a value of 0.82 signifying that a one percent increase in dividend per share increases

share price by 0.82 percent. It also had the highest t-value of 21.96. The return on equity also depicted significant results with a coefficient of 0.30 and t-value of 6.84.

The value of R-square (within) was 0.7064, explaining that independent variables expound 70.64 % variance in the share price which is similar to the findings by Uddin (2009) in his study for Bangladeshi companies. The value of rho, which is also known as intraclass correlation, was 0.80, indicating that 80% variance is due to differences across panels. It means that individual group-specific error accounts for 80% of composite error variance. The poolability test (F test) shows the presence of individual-specific effects with value 17.55 at the p-value of 0.00 (which is less than 0.05). So, between the pooled OLS regression and fixed-effect model, the latter was selected.

**Table 4: Results of Fixed Effect Model using vce Robust Method**

Variable	Coefficient	Robust Std. Error	t value	P value	R square	F Value
DPS	0.04	0.02	2.01	0.05	0.7064	76.59
RR	-0.08	0.09	-0.92	0.36		
PAT	-0.05	0.08	-0.68	0.49		
EPS	0.82	0.05	15.19	0.00		
ROE	0.30	0.06	4.57	0.00		

We have also used the vce robust option to control for heteroscedasticity. Table 4 shows that the value of coefficients and R square remain the same. Only the t-statistics changed significantly. Standard errors were increased in the case of all the two significant variables i.e., earnings per share and return on equity leading to changes in t-values from 21.96 to 15.16 in case of EPS and from 6.84 to 4.57 in case of return on equity. The interpretation remains the same.

**Table 5: Results of Random Effect Model**

Variable	Coefficient	Std. Error	z	P value	R square	Wald chi-square Value	sigma_u	sigma_e	rho
DPS	0.03	0.02	1.48	0.13	0.69	910.71	0.42	0.33	0.60
RR	-0.10	0.06	-1.60	0.11					
PAT	-0.04	0.04	-1.14	0.25					
EPS	0.81	0.03	21.69	0.00					
ROE	0.20	0.04	4.62	0.00					

The results of the random effect model as in Table 5 show the R-square value of 0.69, indicating that 69 percent of variance in the dependent variable is caused due to independent variables taken in the model which is similar to findings by Utami and Darmawan (2019) in their study about Indonesian firms. Here also, earnings per share and return on equity show some significant results. It suggests that when earnings per share of a company increased by one percent across time, which is one year in our case, the share prices move upwards by 0.81%. The return on equity displayed a slight impact over share prices with a coefficient of 0.20. The Wald chi-square test indicated that the model as a whole is significant. In the random effect model, we assumed that the differences across units were uncorrelated with regressors. The standard deviations of residuals within companies (sigma\_u) were 0.42, and standard deviations of residual overall (sigma\_e) were 0.33. The value of rho is 0.60, suggesting that 60% of the variance was due to differences across time (within companies).

To choose between the Random Effect Model and the Pooled OLS regression, we conducted the Breusch and Pagan Lagrangian Multiplier Test. We found that the p-value was equal to zero, thus choosing the Random Effect Model over the Pooled OLS Regression. Then Hausman test was conducted to select between the Random Effect and Fixed-effect models. We found that the p-value was 0.00, which is less than 0.05. So the null hypothesis saying that the Random Effect model is more appropriate was rejected. Hence we selected the fixed-effect model. It infers that variation across share prices of companies is not assumed to be random and is correlated with the predictor variables included in the model.



## DISCUSSIONS

The Table 3 shows dividend per share has an insignificant relationship with share prices. This supports the Miller-Modigliani (MM) Theorem, which argues that dividend policy has no effect on the price of shares. Regardless of whether a firm pays dividends or not, it is at the disposition of investors to generate their own cash flows from the shares owned by them. It depends on their requirement of cash. If they need the money more than the dividend received, they can sell part of the investment held and make up for the balance. They can reinvest the dividends received if they have no immediate cash requirement. The Table-3 also shows that retention ratio has an insignificant negative relationship with stock prices. This means that investors are indifferent between the retention of profits and the distribution of dividends. If the company fetches appropriate investment opportunities that give a greater return than the cost of retained earnings, the shareholders will stay invested in that company as it is the investment policy of a firm which affects its share value and not the dividend policy. Thus, both H1 and H2 are accepted.

The profit after tax displayed an insignificant relationship with share price along with a negative coefficient. The reason behind it is market inefficiency. There is a randomness in the market because of which the information available in public domain does not reflect the price. The investor attempts to find patterns and take advantage of the information available but fails to do so because of randomness, thus making the information futile. Therefore, share price does not react to the profit earned by the company (Arefin and Previn, 2016).

The Table-3 reveals that earnings per share have a significant positive relationship with stock price. A one percent increase in earnings per share will bring a rise of 0.82% in the share price of the company. Fluctuations in share prices can be explained as per cost-earnings evaluation models, which assume that earnings are signs of future cash flows, and stock prices are determined under rational expectations (Balsam and Lipka, 1998). Earnings per share influence share price by changing the market perception and inducing investor's confidence. Similar results were shown by Somoye et al. (2009), Sharma (2011), Nisa and Nishat (2012), Midani (1991), Gill et al. (2012).

Table 3 also reveals that the return on equity has a positive influence on share price. This ratio shows how efficiently a firm has utilized shareholder's equity. It is perceived that the higher the return on equity, the higher will be the intrinsic value of the company (Rekhi, 2016). When a company has a low return on equity, it denotes that it has not used the capital invested by shareholders and may not provide substantial returns to its investors. Companies with a higher return on equity are considered suitable investments. It directly influences stock valuation. Similar results were shown by Pathirawasam et al. (2011). However, Kabajeh et al. (2012) found no relationship between return on equity and share price in an empirical analysis of Jordanian insurance public companies.

## CONCLUSION

In this paper, we studied the effect of dividends on share prices in India. Panel data pertaining to shares listed in the NIFTY-50 index for the period 2008-2018 were used. We chose dividend per share, retention ratio as dependent variables and profit after tax, earnings per share, and return on equity as control variables. The results derived from the fixed-effect models showed that amongst the given variables, earnings per share, and return on equity have a statistically significant relationship with share price. Earnings per share gauges and quantifies a company's profitability per unit of shareholder ownership (Islam et al., 2014). Return on equity measures the ability of a firm to generate profit from the investment of its shareholders. It shows how effectually the company uses equity financing to fund its operations and growth. The dividend per share and retention ratio do not affect stock price. The conclusion is in line with Miller and Modigliani's Theory, denoting that share prices are not affected by dividends. The theory postulates that the value of a firm depends on its earning power only and is not influenced by the way in which its profits are split between dividends and retained earnings. The firm's ability to generate return and the risks in a business decide the value of the firm.

## REFERENCES

- Aharony.J., and Swary.I. (March 1980). Quarterly Dividend and Earnings Announcements and Stockholder's Returns: An empirical analysis. *Journal of Finance*, 1-12.
- Ahmadi, A. (2017). The stock price valuation of Earnings Per Share and Book Value: Evidence from Tunisian firms. *Journal of Internet Banking and Commerce*, 22(1), 1-11.
- Ahsan, (2012). Can Return on Equity be used to predict Portfolio Performance? *Economics, Management and Financial Markets*, 7(2), 132-148.
- Allen, D.E., and Rachim, V.S. (1996). Dividend Policy and Stock Price Volatility: Australian Evidence. *Applied Financial Economics*, 6, 175-188.
- Alawneh, A. (2018). Dividends, Net Income after Tax and Earnings per Share and their impact on the Market Capitalization of listed companies at Amman Stock Exchange during period 1978-2016. *International Journal of Economics and Finance*, 10 (10), 1-69.
- Araoye, F.E., Aruwaji, A.M., and Ajayi, E.O. (2019). Effect of Dividend Policy on Stock Price Volatility in Nigeria Stock Exchange. *International Journal of Accounting and Financial Reporting*, 9(2), 219-231.
- Arefin, S., and Pervin, T. (2016). Financial Ratio Analysis and the impact of earning potential ratios of a company on its market price of stock-A Study on Pharmaceutical and Chemical Industries of Bangladesh. *ISOR Journal of Business and Management*, 18(2), 25-33.
- Balke, N.S., and Wohar, M.E. (2006). What drives stock prices? Identifying the determinants of stock price movements. *Southern Economic Journal*, 73(1), 55-78.
- Balsam., Steven., Lipka., and Ronald. (1998). Share Price and alternative measures of Earnings per Share. *Accounting Horizons*, 12(3), 234-249.

Baskin, J. (1989). Dividend Policy and the Volatility of Common Stock. *The Journal of Portfolio Management*, 15, 19-25.

Beeler, J., and Campbell, J.Y. (2012). The long-run risks model and aggregate asset prices: An empirical assessment. *Critical Finance Review*, 1(1), 141-182.

Chauhan, J., Ansari, M.S., and Ajmal, M. (2019). Dividend Policy and Its Impact on Performance of Indian Information Technology Companies. *International Journal of Finance and Accounting*, 8(1), 36-42.

Chavali, K., and Nusratunnisa. (2013). Impact of Dividends on Share Prices Performance of Companies on Indian Context. *Informative Journals*, 4(1), 20-26.

Fama, E. (1998). Market efficiency, long-term returns, and behavioral finance. *Journal of Financial Economics*, 49(3), 283-306.

Fama., Eugene, F., and French, Kenneth.R. (2001). Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay. *Journal of Financial Economics*, 60(1), 3-43.

Friend., and M, Puckett. (1964). Dividend and Stock Prices. *American Economics Review*, 54, 656-682.

Gitman, L.J., Zutter, C.J., Elali, W., and Roubaie, A.A. (2013). *Principles of Managerial Finance*, Pearson Education.

Hussainey, K., Mgbame, C.O., and Mgbame, A.M. (2011). Dividend Policy and Share Price Volatility: UK Evidence. *The Journal of Risk and Finance*, 12(1), 57-68.

Gill, A., Biger, N., and Mathur, N. (2012). Determinants of Equity Share Prices: Evidence from American Firms. *International Research Journal of Finance and Economics*, 90, 176- 192.

- Gordon, M.J. (1963). Management of Corporate Capital: Optimal Investment and Financing Policy. *Journal of Finance*, 18, 264-272.
- Islam, R., Khan, T.R., Choudhury, T.T., and Adnan, A.M. (2014). How Earning per Share affects Share price and Firm Value. *European Journal of Business and Management*, 6(17).
- Jensen, M.C., and Benington, G.A. (1970). Random Walks and Technical theories: Some Additional Evidence. *Journal of Finance*, 25(2), 469-482.
- Kabajeh, M.A.M., Nuaimat, S.M.A., and Dahmash, F.N. (2012). The Relationship between the ROA, ROE and ROI ratios with Jordanian Insurance Public Companies Market Share Prices. *International Journal of Humanities and Social Science*, 2(11), 115-120.
- Kandpal, V., and Kavidayal, P.C. (2015). A study of dividend policy and its effect on the market value of shares of selected banks in India. *IOSR Journal of Business Management*, 17(1), 41- 44.
- King, B.F. (1966). Market and Factors in Stock Price Behavior. *The Journal of Business*, 39, 139-170.
- Kumaraswamy, S., Ebrahim, R.H., and Mohammad, W.M.W. (2019). Dividend Policy and Stock Price volatility in Indian Capital Market. *Entrepreneurship and Sustainability Issues*, 7(2), 862-874.
- Lease, Ronald., Kose John., Avner Kalay., Uri Lowenstein., and Oded Sarig. (2000). Dividend Policy: Its impact on firm value. *Oxford University Press*, Oxford.
- Lease, R.C., John, K., Kalay, A., Loewenstein, U., Sarig, O.D. (2002). Dividend Policy: It's effect on firm value. *Harvard Business School Press*, Massachusetts.
- LeRoy, S.F., and Porter, R.D. (1981). The Present Value Relation: Tests Based on Implied Variance Bounds. *Econometrica*, 49(3), 555-574.

- Linter, J. (1956). Security Prices, Risk and Maximal Gains from Diversification. *Journal of Finance*, 20(4), 587-615.
- Lintner, J. (1962). Dividends, Earnings, Leverage, Stock Prices and Supply of Capital to Corporations. *The Review of Economics and Statistics*, 44, 243-269.
- Litzenberger, R.H., and Ramaswamy, K. (1979). The Effect of Personal Tax and Dividends on Capital Asset Prices: Theory and Empirical Evidence. *Journal of Financial Economics*, 7(2),163-195.
- Michaely,R., and Roberts,M.R. (2012). Corporate Dividend Policies: Lessons from Private Firms. *The Review of Financial Studies*, 25(3), 711-746.
- Midani, A. (1991). Determinants of Kuwaiti Stock Prices: An empirical investigation of Industrial Services and Food Company Shares. Retrieved from:<http://qspace.qu.edu.qa/bitstream/handle/10576/6908/049102-0008-fulltext.pdf>
- Miller, M., and Rock, K. (1985). Dividend Policy under Asymmetric Information. *Journal of Finance*, 40, 1031-1051. Retrieved from: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1540-6261.1985.tb02362.x>
- Miller, M.H., and Modigliani, F. (1959). The Cost of Capital, Corporation Finance and the Theory of Investment: Reply. *American Economic Review*, 49,655-669.
- Mishra, C., and V.Narender. (1996). Dividend Policies of SoEs in India- An Analysis. *Finance India*, X (3), 633-645.
- Modigliani, F., and Miller, M. (1961). Dividend Policy, Growth and Valuation of Shares. *Journal of Business*, 34, 411-433.
- Mohanty, P. (1999). Dividend and Bonus Policies of the Indian Companies. *Vikalpa*, 24(4), 35-42.

- Muth, J.F. (1961). Rational Expectations and the Theory of Price Movements. *Econometrica*, 29(3), 315-335.
- Nautiyal, N., and Kavidayal, P.C. (2018). Analysis of Institutional Factors Affecting Share Prices: The Case of National Stock Exchange. *Global Business Review*, 19(3), 707-721.
- Nisa, M.U., and M.Nishat. (2012). The Determinants of Stock Prices in Pakistan. *Asian Economics and Financial Review*, 1(4), 276-291.
- Nishat, A., and Chaudhary, I. (2003). Dividend Policy and Stock Price Volatility in Pakistan. *11<sup>th</sup> Pacific Basin Finance Economics and Accounting Conference*.
- Njonge, P.N. (2012). The Effect of Dividend Policy on Share Prices of Companies listed at the Nairobi Securities Exchange. *University of Nairobi*.
- Pandey, I.M. (2010). *Financial Management*, New Delhi: Vikas Publishing House Pvt Ltd.
- Pani, U. (2008). Dividend Policy and Stock Price Behaviour in Indian Corporate Sector: A panel data approach. Retrieved from <http://ssrn.com/abstract=1216171>.
- Pathirawasam, C., and Wickremasinghe, G. (2011). Impact of Information Technology Adoption on Value Relevance of Accounting Information: Evidence from the Colombo Stock Exchange”, *Journal of Modern Accounting and Auditing*, 7(7), 680-688.
- Phelps, E.S. (1986). Profits Theory and Profit Taxation. *Palgrave Macmillan Journals*, 33(4), 674- 696.
- Rashid, A., and Rahman. A. (2008). Dividend Policy and Share Price Volatility: Evidence from Bangladesh. *Journal of Applied Business and Economics*, 8(4), 71-81.

- Rekhi, D. (2016, April 01). What is the Importance of RoE for Investors? *Economicstimes*.
- Sajid.G et al. (2012). The Relationship between Dividend Policy and Shareholder's Wealth. *Economics and Finance Review*, 2(2), 55-67.
- Shabani, V., and Aghaei, S.M.M. (2013). Investigating the Relationship between Earnings and Stock Price in companies accepted in the stock exchange: A case study in Iran (2000-2010). *European Online Journal of Natural and Social Science*, 2(3), 3102-3116.
- Sharma, S. (2011). Determinants of Equity Share Prices in India. *Journal of Arts, Science and Commerce*, 2(4), 51-60.
- Singh, N.P., and Tandon, A. (2019). The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market. *Asia-Pacific Journal of Management Research and Innovation*, 15(1-2), 7-15.
- Somoye,R.O.C., I.R. Akintoye., and J.E Oseni. (2009). Determinants of Equity Prices in the Stock Markets. *International Research Journal of Finance and Economics*, 30,177-189.
- Tanushev, C. (2016). Theoretical Models of Dividend Policy. *Economic Alternatives*. 3, 299-316.
- Thirumalaisamy, R. (2013). Firm Growth and Retained Earnings Behavior- A study on Indian Firms. *European Journal of Business and Management*, 5(27), 40-57.
- Uddin, M.B. (2009), Determinants of market price of stock: A study on bank leasing and insurance companies of Bangladesh. *Journal of Modern Accounting and Auditing*, 5(7), 1-7.
- Utami, M.R., and Darmawan, A. (2019). Effect of DER, ROA, ROE, EPS and MVA on Stock Prices in Sharia Indonesian Stock Index. *Journal of Applied Accounting and Taxation*, 4(1), 15-22.



Venugopal, P.R., and Jampala, R.C. (2019). Impact of Dividend Policy on Share Prices: A study on select Indian Pharma Companies. *The Journal of Indian Management and Strategy*, 24(2).

Walter, J.E. (1963). Dividend Policy: Its influence on the value of an enterprise. *Journal of Finance*, 18(2), 280-291.

Yu Qiao., and Yin Chen. (2001). Dividend Policy and Fluctuation of Stock Market in Chinese Companies. *Economic Research*, 4.