Impact of Dividend Policy on Shareholders Wealth; Evidence from NSE Automobile Index

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ARTICLE DETAILS

Article History
Published Online: 10 December 2018

Keywords
Impact of Dividend, Pooled OLS, Fixed and Random Effect model

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ABSTRACT

This study examines the impact of dividend policy on shareholders wealth on selected companies of Automobile sectorial index of NSE. The study covers the period from 1st April 2007 to 31st March 2017, which consists of ten years. In order to fulfill the objective of the study the researcher has collected dependent and independent variables. The dependent variable is market price per share i.e., shareholder wealth and the independent variables are DPS, EPS, PER, Earnings, Firm size and ROA. The collected data has been tested by different econometric tools like correlation matrix, Pooled Least Square Regression Equation, Fixed Effect model, Random Effect model and Hausman Test. The empirical findings of the study exposes that there is a significant impact on dividend policy and earnings per share, price earnings ratio and return on assets. There is no significant difference between dividend policy and earnings and firm size.

1. Introduction

Dividend decision creates an important impact on firm financial decision and share price. The share price increases when there is smooth payment of dividend exist. Normally, investors do not prefer to purchase the shares of such type of companies which cannot make dividend continuously and of which the dividend decisions have variability because of the risk of loss associated with these variations. Simians (1995) argue that shareholders' wealth is largely influenced by the organization's dividend policy. It is an approach which is used to distribute the profit back to its shareholders.

The primary objective of every financial manger has to maximize the shareholders wealth. Shareholders wealth is represented in the market price of the share which is the result of company's financing, investment and dividend policy decisions. The optimal dividend policy is increases the share prices of the company which in return increase the shareholder's wealth. (https://www.questia.com)

Many researchers and academician describes numerous literature related to dividend policy theory, shareholder benefits and firm efficiency. The present research study intended to analyze the impact of dividend policy on the wealth of shareholders.

2. Theoretical framework

Theories on dividend policy

Theories dealing with the dividend policy were split into three group theories:

- The first theory, which supports the idea of paying very high dividend
- The second theory, which supports the idea that dividend policy is irrelevant and
- The third theory, which supports the idea that investors prefer a low dividend.

2.1 Investors prefer a high dividend (The-bird-in-the-hand theory) :

Lintner (1962) and Gordon (1963), Theory on paying the high dividend, is based on the fact that shareholders prefer a safe return, respectively they have risk aversion. So, a quick dividends received is less risky than a potential profit from capital gain, which will be taken in the future more or less distant. Consequently, shareholders will seek return of their shares as high as possible and also can make to increase the value of shares of a corporation's capital markets, delivering high dividends.

2.2 Dividend policy is irrelevant:

Merton Miller and Franco Modigliani, (known as the theory of M & M) do not agree with theory of Gordon and Lintner. According to them, dividend policy is irrelevant; dividend policy has no effect on the required rate of return. Investors are indifferent between dividends and retention-generated capital gains. If they want cash, they can sell stock. If they don't want cash, they can use dividends to buy stock.

2.3 Investors prefer a low dividend:

According to the Brennan theory (1970), shareholders prefer low dividends due to the fact that dividends are taxed at a higher rate than capital gain (this is especially based in the U.S. 1986). According to this theory, shareholders would prefer to receive a lower income and capital gains on financial securities they possess, than to accept the dividend income. In favor of this theory are some fiscal systems that promote non-payment of dividends and reinvested it to stimulate the corporation and remains in the form of retained earnings. Besnik Livoreka *et al.,* (2014).

3. Review of literature

Miller and Franco Modigliani (1961), the study analysed that the tax differential in favor of capital gains is undoubtedly the major systematic imperfection in the market, one clearly cannot invoke "imperfections" to account for the difference between our irrelevance proposition and the standard view as to the role of dividend policy found in the literature of finance

Paul Asquith and David W. Mullins, Jr. (1983), investigated the impact of dividends on stockholders' wealth by analyzing 168 firms that either pay the first dividend in their corporate history or initiate dividends after a 10-year hiatus. The results of the study exhibit larger positive excess returns than any previous study on dividends. This result does not depend on any other events (such as earnings announcements) and the excess return is positively related to the size of the initial payment. Subsequent dividend increases for the same sample of firms were also investigated. Compared with the initiation of dividends, the results suggest that subsequent increases may produce a larger positive impact on shareholders' wealth.

R. Azhagaiah and Sabari Priya N (2008), analyzed the impact of dividend policy of shareholders’ wealth in Organic and Inorganic Chemical Companies in India during 1996 – 1997 to 2005-2006. The study is evident that that the wealth of the shareholders is greatly influenced mainly by five variables viz., Growth in sales, Improvement of Profit Margin, Capital Investment Decisions (both working capital and fixed capital), Capital Structure Decisions, Cost of Capital (Dividend on Equity, Interest on Debt) and so on. There is a significant impact of dividend policy on shareholders’ wealth in Organic Chemical Companies while the shareholders’ wealth is not influenced by dividend payout as far as Inorganic Chemical Companies are concerned.

Sujata Kapoor *et al.,* (2009), the study found that there are sectoral differences in corporate dividend policy determinants. The results are consistent with conclusion of Baker, Farrelly, and Edelman (1985) and Ho Horace (2002) that firm’s industry type influence dividend policy. A factor which may be relevant for one industry becomes irrelevant for another depending upon the Industry characteristics like growth phase, ownership pattern, size, systematic risk and earnings variability.

Fouzia Iram (2010), discussed the impact of dividend policy of shareholders’ wealth in Textile sector of Pakistan during the 2004. The results of the study exposed that significant impact of dividend policy on shareholders’ wealth.

Shahid Ali *et al.,* (2011), the results of the analysis showed that returns have a negative correlation with dividend policy and firm size and have a positive correlation with return on assets, price-earnings ratio and growth of the company for the companies with year ended June. For the companies with year ended December returns are negatively correlated with size of the firm, dividend payout ratio, and return on assets.

4. Objectives of the study

The overall objective of the study is to examine the impact of dividend policy on shareholder wealth. The following are more specific objectives. They are;

1. to determine the impact of market price per share and DPS, EPS, PER, Earnings, Firm size and ROA; and
2. to analyze descriptive statistics of selected explanatory variables.
3. to identify the relationship between selected explanatory variables

5. Hypotheses of the study

1. H_0: There is no significant difference between the impact on dividend policy and shareholders wealth.ss
2. H_0: The selected companies coefficient are equal
3. H_0: Pooled OLS Model is more appropriate than the fixed effect model.
4. H_0: Pooled OLS Model is more appropriate than the Random effect model.
5. H_0: Fixed effect model is more appropriate than the Random effect model.

6. Methodology of the study

6.1. Sample Selection

The transport system in India consists of land, water, and air. Roads are the dominant mode of transportation in India today. They carry almost 85 per cent of the country’s passenger traffic and more than 60 per cent of its freight. Road transport has played a pivotal role in the growth of India’s automobile industry. The automobile is one of the largest industries in the global share market. The automobiles sector also attain maximum performance in BSE and NSE. Hence, investors eagerly wish to invest in automobile sectors. The automobile industry is one of the leading sectors in investment. Automobile company dividend yield ratio is high compared to other sectors. Henceforth, the researcher willing to study shareholder wealth of automobile companies.

National Stock Exchange (NSE) is the leading stock exchange in India. Hence, the NSE Sectoral indices of Automobile index have been chosen for further studies. As on 31st March 2018, NSE Automobile Sectoral Index has 16 companies scrips. The researcher has selected only 13 companies scrip's based on a consecutive distribution of dividend over the study period. The remaining three company scrips were not considered due to non-distribution of dividend throughout the study period.

6.2 Data Collection

The data collected for this empirical study are dividend per share, Earnings per share, price earnings ratio, earnings, firm size and return on assets. In order to collect these data the researcher has used www.screener.in. The sample includes data from 1st April 2007 to 31st March 2017, which consists of 10 years.

6.3 Tools used for the study

The researcher has applied the following tools to identify the Impact of dividend policy on shareholder wealth.

Descriptive Statistics

It consists of Mean (Maximum, Minimum), median and Standard Deviation.

Pooled Ordinary Least Square

Y_{it} = α + DPSit + EPSit + PER it + Earnings it + Firm size it + ROA it + eit

Whereas: i: Name of the Company, t: Time period.

Fixed Effect Model

Y_{it} = α + DPSit + EPSit + PER it + Earnings it + Firm size it + ROA it + eit

Random Effect Model and

Yit = α + DPSit + EPSit + PER it + Earnings it + Firm size it + ROA it + eit +μ_i

Variable :

I. DEPENDENT VARIABLE

Market price per share (MPS): The market value per share means the price that a stock can be readily bought or sold in the current marketplace.

II. INDEPENDENT VARIABLE

Dividend per Share (DPS): Dividend per share (DPS) is the sum of declared dividends issued by a company for every ordinary share outstanding. It is the ratio between the sum of total dividends to the total number of outstanding shares of a company.

Earnings per Share (EPS): The term earnings per sw hare (EPS) represents the portion of a company's earnings, net of taxes and preferred stock dividends, that is allocated to each share of common stock

Price Earnings Ratio (PER): Price Earnings ratio is the ratio of company's current share price to its earnings per share.

Return on Assets (ROA): Return on assets is an indicator of how profitable a company is relative to its total assets.

Earnings: Earnings are the amount of profit that a company produces during a specific period. i.e., Profit after interest and tax.

Firm size: Total assets, total sales, and market value of equity, and also their natural logarithm terms. In this article firm size is taken from total sales.

7. Data analysis and interpretation

Table 1.1Descriptive Statistics

Variable	Mean	Median	S.D.	Min	Max
MPS	3400.00	231.00	8640.00	7.97	67900.00
DPS	25.40	24.30	17.10	0.00	109.00
EPS	185.00	23.90	539.00	0.11	3890.00
PER	21.50	17.40	21.80	0.18	196.00
Earnings	996.00	541.00	1180.00	29.40	7340.00
Firm size	11800.00	7090.00	12900.00	375.00	68000.00
ROA	13.50	10.50	11.30	0.23	77.80

Source: Compiled from Gretl.

The table 1.1 depicts the descriptive statistics for dependent and independent variables. The market price per share shows maximum of 67900.00 and minimum is 7.97 with an industry average of 3400.00. The standard deviation from the mean point is 8640.00. The dividend per share shows a maximum of 109.00 and minimum is 0.00 with an industry average of 25.40. The standard deviation from the mean point is 17.10. In addition to that, the table also explains about mean, the maximum, minimum and standard deviation for the independent variable.

Table 1. 2 Correlation Matrix

Correlation	MPS	DPS	EPS	PER	EARNINGS	FIRM_SIZE	ROA
MPS	1.000000						
DPS	-0.260167	1.000000					
EPS	**0.767060**	-0.214877	110				
PER	0.151054	-0.029308	-0.050473	100			
EARNINGS	0.139623	0.091665	0.095898	-0.083685	100		
FIRM_SIZE	0.039172	0.055106	0.046820	-0.056314	**0.930400**	100	
ROA	**0.703599**	-0.073512	0.533845	0.108773	0.284690	0.099851	1.

Source: Compiled from Gretl.

The table 1.2 shows the level of the independent variables in the regression analysis is correlated to each other. In the output of correlation matrix clearly displays that only a few of the correlation coefficient exceeded 0.50 which mean that high correlation will generate a problem of multicollinearity. The correlation between earning per share and market price per share (0.767060), the correlation between return on assets and market price per share (0.703599) and the correlation between firm size and earnings (0.930400). It is clear that firm size and earnings have multicollinearity and remaining variables are no multicollinearity.

Table 1.3
Model 1: Pooled OLS, using 130 observations
Included 13 cross-sectional units
Time-series length = 10
Dependent variable: MPS

H_o: The selected companies coefficient is equal.
Ha: The selected companies coefficient is not equal.

	Coefficient	*Std. Error*	*t-ratio*	*p-value*
const	−1689.37	1052.15	−1.606	0.1109
DPS	−57.9644	24.1510	−2.400	0.0179**
EPS	8.74926	0.914013	9.572	<0.0001***
PER	54.4036	18.9394	2.873	0.0048***
Earnings	0.661539	1.13734	0.5817	0.5619
Firmsize	−0.0626698	0.0989664	−0.6332	0.5278
ROA	285.039	51.1333	5.574	<0.0001***

Mean dependent var	3395.242	S.D. dependent var	8638.882
Sum squared resid	2.50e+09	S.E. of regression	4507.303
R-squared	0.740442	Adjusted R-squared	0.727781
F(6, 123)	58.48054	P-value (F)	1.04e-33
Log-likelihood	−1274.613	Akaike criterion	2563.227
Schwarz criterion	2583.299	Hannan-Quinn	2571.383
Rho	0.157561	Durbin-Watson	1.091193

Source: Compiled from Gretl.

Table 1.3 shows that pooled OLS regression equation on the impact of dividend policy on shareholder wealth. The above table shows that the p-value is less than 5 per cent. Hence the null hypothesis is rejected i.e., the selected companies intercept is not equal. As per the panel data procedure if the null hypothesis is rejected, move to panel diagnosis analysis. Panel data model diagnosis procedure generally have three steps namely, 1. Pooled OLS Model is more appropriate than the fixed effect model if the step one rejected move to step two. 2. Pooled OLS Model is more appropriate than the Random effect model if step two rejected move to step three. 3. Both step 1 and step 2 are reject moved to Hausman test.

Table 1.4
Pooled OLS Model Vs Fixed Effect Model
Ho: Pooled OLS Model is more appropriate than Fixed Effect Model.
Ha: Fixed Effect Model is more appropriate than Random Effect Model

Joint significance of different group means: F(12, 111) = 3.85224 with p-value 6.36567e-005 (A low p-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative.)

Source: Compiled from Gretl.

The table 1.4 exhibits Pooled OLS Model Vs Fixed Effect Model. The p-value is 0.00 which is less than f test value i.e., 3.85224. Hence, we reject the null hypothesis and accept alternative hypothesis i.e., Fixed Effect model is more appropriate. In order to ensure the fixed effect model again the researcher analysed Pooled OLS Model Vs Random Effect Model.

Table 1.5
Pooled OLS Model Vs Random Effect Model
Ho: Pooled OLS Model is more appropriate than Random Effect Model
Ha: Random Effect Model is more appropriate than Pooled OLS Model.

Breusch-Pagan test statistic:
LM = 5.74706 with p-value = prob (chi-square(1) > 5.74706) = 0.0165163 (A low p-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the random effects alternative.)

Source: Compiled from Gretl.

The table 1.5 exhibits Pooled OLS Model Vs Random Effect Model. The p-value is 0.00 which is less than LM test value i.e., 5.74706. Hence, we reject the null hypothesis and accept alternative hypothesis i.e., Random Effect model is more appropriate. In order to ensure whether fixed effect model or random effect model is appropriate again the researcher analysed Hausman test.

Table 1.6
Hausman test statistic:
Ho: Random Effect Model is more appropriate then Fixed Effect Model.
Ha: Fixed Effect Model is more appropriate then Random Effect Model.

H = 35.3541 with p-value = prob(chi-square(6) > 35.3541) = 3.67949e-006, (A low p-value counts against the null hypothesis that the random effects model is consistent, in favor of the fixed effects model.)

Source: Compiled from Gretl.

The table 1.6 exhibits Hausman test statistic. The p-value is 0.00 which is less than H test value i.e., 35.3541. Hence, we reject the null hypothesis and accept alternative hypothesis i.e., Fixed Effect model is more appropriate.

Table 1.7
Model 2: Fixed-effects, using 130 observations
Included 13 cross-sectional units
Time-series length = 10
Dependent variable: MPS

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const	−4500.38	1375.41	−3.272	0.0014	***
DPS	33.8731	35.9627	0.9419	0.3483	
EPS	7.55939	0.966299	7.823	<0.0001	***
PER	42.8744	19.9938	2.144	0.0342	**
Earnings	1.88329	1.20542	1.562	0.1211	
Firmsize	−0.0752812	0.127230	−0.5917	0.5553	
ROA	276.428	51.1057	5.409	<0.0001	***

Mean dependent var	3395.242	S.D. dependent var	8638.882
Sum squared resid	1.76e+09	S.E. of regression	3986.629
LSDV R-squared	0.816756	Within R-squared	0.656056
LSDV F(18, 111)	27.48609	P-value(F)	1.06e-32
Log-likelihood	−1251.983	Akaike criterion	2541.966
Schwarz criterion	2596.449	Hannan-Quinn	2564.104
Rho	−0.044729	Durbin-Watson	1.466278

Source: Compiled from Gretl.

The Table 1.7 displays the results of fixed effect model for impact of dividend policy on shareholder wealth. The coefficient values of earning per share, price earnings ratio and return on assets are significant at 1 and 5 per cent level. However, Dividend per share, earnings and firm size are not influence shareholder wealth based on the probability value. Additionally, the value of R2 in the fixed effect regression model is 0.816756. It means that the fitness of independent variables (earning per share, price earnings ratio and return on assets) in explaining the dependent variable (Shareholder wealth) of selected companies listed in NSE Automobile Sectoral Index for 2007-2017 value is 81.68 per cent, while the rest of 18.32 per cent described other variables that are not included in this study. Hence, it is understood that there is a significant impact on dividend policy and earning per share, price earnings ratio and return on assets. There is no significant difference between dividend policy and earnings and firm size.

8. Conclusion

From the empirical, this study strongly evident that there is a significant effect on dividend policy and shareholder wealth. The fixed effect model exposes that Corporate Tax, Current Earnings, Firm Size and Profitability in explaining the dependent variable (DPR) of selected companies listed in NSE Automobile Sectoral Index for 2007-2017 value is 81.68 per cent, while the rest of 18.32 per cent described other variables that not included in this study.

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