

# Dividend Policy on Shareholders Wealth – Evidences from Indian Pharmaceutical Industry

P. G. Thirumagal and S. Vasantha

School of Management Studies, Vels University, 200 Feet Road, Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600043, Tamil Nadu, India; tmagal.sms@velsuniv.ac.in, vasantha.sms@velsuniv.ac.in

## Abstract

**Background/Objectives:** This topic on the impact of dividend policy on shareholders wealth of the companies is one of the most researched topics in finance. The main objective of this paper is to find out the dividend policy's impact on shareholders wealth. **Method/Statistical Analysis:** The ten companies listed in NIFTY PHARMA of NSE have been considered for the study. Fifteen years data have been used (2001 to 2015). With the help of previous literature, MPS (Market Price Per Share) used to measure Shareholders wealth and the predictor variables are Price Earnings Ratio (PER), Dividend Per Share (DPS), Earnings Per Share (EPS), Total Assets (TA) and Cash and Bank Balance by Total Assets (CABBBYTA) were used by representing Dividend, Risk, Earnings, Firm Size and Liquidity of the companies. The Descriptive statistics and Normality test (Jarque - Bera) test found that the data were normally distributed. The conditions for regression like viz., Breusch-Pagan-Godfrey Heteroskedasticity Test, Breusch-Godfrey Serial Correlation LM Test, VIF for Multicollinearity, Augmented Dickey-Fuller test for unit root were used and found that the data were homogenous, free from auto correlation, multicollinearity and unit root. Eviews 7 Econometrics software package was used. **Findings:** Regression results show that the dividend, risk and liquidity of the companies impact shareholders wealth. Size and Earnings of the companies were insignificant with the shareholders wealth.

**Keywords:** Dividend, Market Capitalisation, Profitability, Shareholders Wealth

## 1. Introduction

Dividend decisions are one of the important financial decisions because the role of finance has increased significantly on the overall growth of the company as suggested by Gul et al.<sup>4</sup>. Dividend decision is one of the top ten complex issues in finance as mentioned by Brealey and Myers (2002). Dividend decisions decide on the amount of earnings to be distributed as dividend and the amount to be retained by the company. The amount of earnings to be retained by the company depends on the investment opportunities available. Each firm should develop an optimum dividend policy that divides the earnings into dividend and retained earnings which ultimately maximises the shareholders wealth. In spite of several researches, the relationship between dividend policy and shareholders wealth is still unsolved.

Shareholders wealth maximisation the main objective of any company which is represented in terms of market price of share which in turn is the result of financial decisions as per Geja Lakshmi & Azhagaiah (2015) and Gul et al.<sup>4</sup>. Dividend policy of the company impacts the stakeholders like managers, investors, lenders and others in different aspects. Investors prefer current dividend which leaves fewer funds for future investment. Similarly more dividend declared affects lenders claims as mentioned by Gul et al.<sup>4</sup>. So, the study on impact of dividend decision on shareholders wealth is the primary need of the hour.

To study the impact of dividend on shareholders wealth, Indian pharmaceutical companies have been selected. Pharmaceutical industry in India is the third largest in terms of volume and thirteenth in terms of value in the World. Seventy to Eighty percent of the phar-

\*Author for correspondence

maceutical market is dominated by the branded generics. In terms of volume, nearly 20 percent of Indian generic drugs contributed in exports. Since, the pharmaceutical industry in India is highly fragmented; consolidation has become an important characteristic of the industry. India occupies an important position in the Global pharmaceutical sector with large pool of talented scientists and engineers who have the potential to take the industry to the next level (Source: Indian Brand Equity Federation).

According to a Fitch Company predicted that the Indian pharmaceutical companies will grow at 20 percent CAGR in the next five years. Between 2015 and 2020, the pharmaceutical industry in India is expecting a growth over 15 percent annually which will be more than the Global pharmaceutical industry estimate of 5 percent during the same period. As on 2016, the market size of Indian pharmaceutical industry is US\$ 20 billion. As on March 2014, three total numbers of Indian pharmaceutical manufacturing facilities registered under US Food and Drug Administration (FDA) is 523. This is the highest by any country outside the US. The biotechnology industry in India including bio-pharmaceuticals, bio-services, bio-agriculture, bio-industry and bioinformatics is expecting a growth rate of around 30 percent a year and would reach US\$ 100 billion by 2025. The largest sub sector including Biopharma, comprising vaccines, therapeutics and diagnostics, is contributing nearly 62 percent of the total revenues at Rs 12,600 crore (US\$ 1.9 billion).

By 2025, the Pharmaceutical industry in India's market size is expected to grow to US\$ 100 billion, which is driven by increasing consumer spending, rapid urbanisation, and raising healthcare insurance. From 1991 to 2013, the contribution of pharmaceutical industry in India to GDP is 1.30 percent. The important objective of this paper is to analyse the impact of dividend policy on shareholders wealth of Indian pharmaceutical industry. This study will also analyse the variation impact of selected variables (Dividend, Risk, Earnings, Firm Size and Liquidity) on Shareholders wealth.

### 1.1 Hypotheses:

H01: There is no significant impact of Dividend Payout of the firm on Shareholders wealth

H02: There is no significant impact of Risk of the firm on Shareholders wealth

H03: There is no significant impact of Earnings of the firm on Shareholders wealth

H04: There is no significant impact of Firm size on Shareholders wealth

H05: There is no significant impact of Liquidity of the firm on Shareholders wealth

## 2. Methodology

Past studies were carried out to identify the relation between dividend policy (DP) and shareholders' wealth (SW). "Olandipupo and Okafor<sup>6</sup>, Devaki and Kamalaveni, Gul Collins et al., Onwumere et al., Salman (2013), Bawa and Kaur (2013), Azhagaiah and Sabaripriya<sup>1</sup>, Tahir and Raja<sup>9</sup>, Atiyet, Chidinma et al.<sup>3</sup>, Kumaresan<sup>5</sup>, Uwuigbe et al. and Parua and Gupta" investigated the impact of DP on SW applying Ordinary Least Square (OLS) method of regression.

The study used 10 dividend paying pharmaceutical companies of NIFTY PHARMA listed in NSE. Secondary data were collected for 15 years (2001-2015) from the annual reports of the companies and Prowess database. The data were taken from reliable sources to ensure reliability of the study. "Statistical tools like Jarque - Bera test, Augmented Dickey Fuller Test, Heteroskedasticity Test - Breusch-Pagan-Godfrey, Breusch-Godfrey Serial Correlation LM Test, VIF and Multiple Regression. Shareholders wealth is measured through Market Price of Share (MPS) as used by Gul et al.<sup>4</sup>, Salman and Sarwar, Azhagaiah and Sabaripriya<sup>1</sup>, Ansar et al. and Bawa and Kaur. The predictor variables Liquidity (CR) suggested by Kai et al., Dividend Per Share (DPS) which measures Dividend Payout as mentioned by Bawa and Kaur (2013), Gul et al.<sup>4</sup>, Azhagaiah and Sabaripriya<sup>1</sup>, Ansar et al., Kumaresan<sup>5</sup>, and Salman and Sarwar, Risk (PER) as mentioned by Salman Sarwar and Firm Size (TA) by Iqbal et al. and Liquidity (CABBBYTA) by Kai et al." were considered. The general regression equation model is

$$MPS = \beta_1 (DPS) + \beta_2 (PER) + \beta_3 (EPS) + \beta_4 (TA) + \beta_5 (CABBBYTA) + e$$

The following are the list of dividend paying Pharmaceutical companies in India.

**Table 1**

S.No	Dividend Paying companies
1	Aurobindo Pharma
2	Cadila Health
3	Cipla
4	Divis Labs
5	Dr. Reddy Labs
6	GlaxoSmithKline
7	Glenmark
8	Lupin
9	Piramal Enterprises
10	Sun Pharmaceuticals

## 3. Results and Discussion

### 3.1 Descriptive Statistics

In descriptive statistics, the data sets of 142 observations for 10 companies for 15 years with 6 variables were used. The mean and median value of all the variables are closely related which reveals the normality of the data. The log values of the variables were used to achieve normality. The maximum and minimum of all the variables were significantly different. The risk is high and the earnings have shown least volatility. Earnings and Liquidity alone positively skewed and the remaining variables are negatively skewed.

**Table 2**

Variables	MPS	DPS	PER	EPS	TA	CABBYYTA
Mean	5.49	1.68	2.18	3.31	7.63	-4.31
Median	5.77	1.61	2.52	3.34	7.62	-4.54
Maximum	8.10	4.14	4.73	6.64	9.63	0.03
Minimum	2.08	-0.92	-3.08	1.56	5.29	-6.87
Std.Dev	1.38	1.00	1.40	0.82	0.98	1.33
Skewness	-0.38	-0.09	-0.71	0.24	-0.09	0.95
Kurtosis	2.60	3.41	3.25	3.93	2.46	4.68
Jarque-Bera	4.27	1.19	12.37	6.50	1.94	38.19
Probability	0.12	0.55	0.00	0.04	0.38	0.00
Observations	142	142	142	142	142	142

### 3.2 Normality Test

Ho: Data normally distributed

H1: Data not normally distributed

Since the p value is greater than 5%, we accept the null hypothesis ie the data is normally distributed.

### 3.3 Tests to check conditions for Regression

The following tests were done to check the conditions for Regression

- Unit Root test
- Heteroskedasticity test
- Auto Correlation
- Multicollinearity

Table 3 tests the unit root presence in the data which is found using Augmented Dickey-Fuller test. The results proves that the data are stationary

Ho: Unit Root

H1: No Unit Root

Since the p values are less than 5%, null hypothesis is rejected which infers that there is no unit root and the data are stationary.

One of the important conditions for classical linear regression model is that there should not be heteroskedasticity between variables. Since the probability is more than 5%, there is no heteroskedasticity which implies that the data have uniform spread.

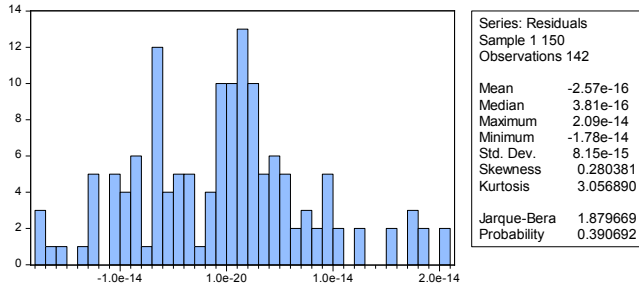


Figure 1:

Table 3: Augmented Dickey – Fuller test statistic (Unit Root)

Variables	t-statistic	P value
MPS	-4.356	0.0005
DPS	-3.548	0.0080
PER	-8.937	0.0000
EPS	-11.958	0.0000
TA	-6.151	0.0000
CABBBYTA	-4.454	0.0004

Table 4: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F- statistic	0.829	Probability	0.5312
Obs* R squared	4.196	Probability	0.5216

Table 5 shows the Serial Correlation test. The p value is more than 5%, which implies that there is no serial correlation among the variables.

A multicollinearity test is done to test the presence of linear relationship among the explanatory variables. This is done through Variance Inflationary Function test. Since the VIF is less than 5 for all the variables, we found that there is no multicollinearity among the variables.

Table 5: Breusch-Godfrey Serial Correlation LM Test

F- statistic	1.479	Probability	0.0536
Obs* R squared	62.608	Probability	0.0634

Table 6: Variance Inflationary Factor

Variables	VIF
DPS	1.80
PER	1.08
EPS	1.04
TA	1.05
CABBBYTA	1.84

### 3.4 Dividend Impact on Shareholders Wealth

The dividend impact on Shareholders wealth is analysed using Multiple Regression having MPS as dependent variable, and DPS, PER, EPS, TA and CABBBYTA as independent variables.

#### H01: There is no significant impact of Dividend Payout of the firm on Shareholders wealth

Since the p value is less than 5%, null hypothesis is rejected. So the DPS is positively significant on shareholders wealth (28.96) which is supported by Geja Lakshmi & Azhagaiah, Shahid Ali et al., Sarwar and Naseem, Bawa and Kaur, Iqbal et al., Mokaya et al., Murekefu and Ouma, Zakaria et al., Gul et al.<sup>4</sup>, Baker and Powell, Ansar et al., Azhagaiah and Sabaripriya<sup>1</sup>, de Wet, Kumaresan<sup>5</sup>, Salman Sarwar, Chidinma et al.<sup>3</sup>. as against Elangkumaran, Hashemijoo et al., Ilaboya & Aggreh, Tahir and Raja<sup>9</sup>, and Chenchene & Mensah.

#### H02: There is no significant impact of Risk of the firm on Shareholders wealth

Since the p value is less than 5%, null hypothesis is rejected. So, the PER is positively significant on shareholders wealth (7.73) which is supported by Shahid Ali et al. as against Tahir and Raja<sup>9</sup>.

#### H03: There is no significant impact of Earnings of the firm on Shareholders wealth

Since the p value is greater than 5%, null hypothesis is accepted which means there is no significant impact of EPS on shareholders wealth which is supported by de Wet (2013) as against Salman Sarwar (2013), and Chenchene & Mensah (2015).

Table 7: Multiple Regression Dependent Variable: MPS

Variables	B	t-statistic	P value
DPS	28.96	6.03	0.00
PER	7.73	4.52	0.00
EPS	0.07	0.12	0.90
TA	0.05	5.43	0.00
CABBBYTA	685.98	2.13	0.03
Adjusted R Square	0.5457		
R Square	0.5299		
F Stat	34.59		
Prob (F – Stat)	0.000		

#### H04: There is no significant impact of Firm size on Shareholders wealth

Even though the p value is less than 5% and null hypothesis is accepted, the impact of TA on shareholders wealth is very minimum (0.05) which is supported by Shahid Ali et al. as against Iqbal et al., Chordia et al., and Chenchehene & Mensah.

#### H05: There is no significant impact of Liquidity of the firm on Shareholders wealth

Since the p value is less than 5%, null hypothesis is rejected. So, the CABBYYTA is positively significant on shareholders wealth (685.98) which is supported by Chordia et al. (2008), Fang et al., Lam & Tam, Emery & Cogger, Elouafa, Kai et al. as against Beneish and Whaley, and Calcagno & Heider.

This implies that the dividend, risk and liquidity of the firms in Indian pharmaceutical industry impact the shareholders wealth with R square of 54.57%.

$$\text{MPS} = 6.03 (\text{DPS}) + 4.52 (\text{PER}) + 0.12 (\text{EPS}) + 5.43 (\text{TA}) + 2.13 (\text{CABBYYTA}) + e$$

It was found that the conditional tests of Multiple Regression were found satisfactory. So, the impact of dividend policy on shareholders wealth through regression found that the Dividend (DPS) as per Bawa and Kaur, Gul et al.<sup>4</sup>, Azhagaiah and Sabaripriya<sup>1</sup>, Ansar et al., Kumaresan<sup>5</sup>, and Salman and Sarwar, Risk (PER) as mentioned by Salman and Sarwar and Liquidity (CABBYYTA) Kai et al. of the companies affect the shareholders wealth, whereas the earnings Chenchehene & Mensah and size of the company (in contrast with Iqbal et al.) do not impact the shareholders wealth. If more dividend paid, if more risk taken with sufficient liquidity then the shareholders wealth would be maximized. Size of the companies and Earnings of the companies do not affect the shareholders wealth in Indian Pharmaceutical companies.

## 4. Conclusion

This research paper used Eview 7 to analyse the Dividend policy impact on Shareholders wealth of Indian pharmaceutical industry considered 10 companies in NIFTY PHARMA using 15 years data from 2001 to 2015. The study checked the normality of the data through Jarque - Bera statistic and found that the data were normally distributed. The conditional test for Multiple Regression was

done which found that the data are stationary (Augmented Dickey-Fuller test for Unit Root), Heteroskedasticity Test (Breusch-Pagan-Godfrey) to find out the uniform spread of the data, Breusch-Godfrey Serial Correlation LM Test to check the autocorrelation among the variables and VIF test for Muticollinearity. It was found that the conditional tests of Multiple Regression were found satisfactory. So, the dividend policy impact on shareholders wealth through regression found that the Dividend (DPS) as per Bawa and Kaur, Gul et al.<sup>4</sup>, Azhagaiah and Sabaripriya<sup>1</sup>, Ansar et al., Kumaresan<sup>5</sup>, and Salman and Sarwar, Risk (PER) as mentioned by Salman and Sarwar and Liquidity (CABBYYTA) Kai et al. of the companies affect the shareholders wealth, whereas the earnings Chenchehene & Mensah and size of the company (in contrast with Iqbal et al.) do not impact the shareholders wealth.

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