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# A Case Study of a Pharmaceutical Firm in India in Terms of Dividend Payment Determinants in 2004 to 2018

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**Abstract:** *The entire paper focused on the analysis's chosen target, with the coefficient of current variable showing that EPS and ROA have a negative relationship with the dependent variable (dividend payout), while ROE has a positive relationship with the dependent variable (dividend payout) when all study occurrence constants are taken into account. Second, with the exception of EPS, the ROA and ROE variables are important in this analysis. The study's sample was taken from the pharmaceutical industry, with one company (sun pharma ltd) being chosen as the subject. Annual results were gathered over a span of fifty years, from 2004 to 2018.*

**Keywords:** *EPS, ROE, ROA and dividend payout*

## I. INTRODUCTION

Any business pays a dividend after a certain amount of time has passed. Initially business board meetings agreed how much benefit share and keep for the company's more acquisition or growth intent for future. The thesis provides a good view of the various determinants of dividend payout and the types of correlations that exist for the selection of dividends that are influenced by the determinants of a company's financial components. On the other hand, the company's historical records indicated that the next acquisition opportunity for an outsider or stockholder was imminent. As any investor put money into a firm, they looked into and investigated a number of financial criteria, one of which was dividend yield. Find the three instruments of a company's financial reporting in our research: 1. Earnings per share 2. Return on equity and 3. Return on assets.

Jensen (1986) and Rozeff (1982) argued that companies could use dividend payment to minimise agency issues.<sup>1</sup> They claim that if dividends are not paid to shareholders, the executives would begin to use these funds for personal gain. Dividend policy enables businesses to understand how they can manage agency expenses by implementing Dividend policy. By paying dividends to shareholders, Jensen (1986) concluded, managers' power over capital can be reduced. The dividend, according to Stouraitis and Wu (2004), may be used to suffocate companies' overinvestment issues. As a result, dividend payout is regarded as one of the most important financial choices that chief executives could make (Baker and Powell, 1999). It may impact share prices and, as a result, capital returns, as well as the funding of internal growth and the asset base by retentions, as well as the company's gearing and leverage (Omran & Pointon, 2004). Frankfurtet & McGoun (2000) concluded that the dividend dilemma is one of the most complex issues in modern financial economics, both as a share value-enhancing element and as a policy problem. Mizuno (2007) accepts that a corporation can pay dividends to shareholders if it is unable to find appropriate assets that would produce better returns than the shareholders expect. Researchers disagree about whether dividend yield has a significant impact on long-term stock prices. Dhanani (2005) observed that dividend policy serves to improve corporate brand equity by using a survey methodology to collect management opinions and expectations towards dividend policy. Farsio et al., (2004), on the other hand, suggest that observational research concluding a causal association between earnings and dividends are based on brief time intervals and thus confuse future investors. As a result, dividends have no statistical value for potential profits. As a result, the aim of this study is to see whether there is a connection between dividend payment and firm results..

### A. Relevance of the Study

In general, the research is based on the determinants of dividend payout and the relationship's association in real life. There are numerous tools available for analysing a company's overall performance, including EPS, PBIT, PE, and dividend payout. This research aims to look into some of the factors that influence the behaviour of a company's dividend payout ratio in India. The need for this study was prompted by the contradictory and conflicting responses to the question of the relevance of dividend payout on its determinants firms' performance. The goal of this research is to see how a company's dividend payout affects investors' interest and, as a result, how it affects the company's financial performance.

### B. Company's profile

Sun Pharmaceutical Industries Ltd is a specialty pharmaceutical company based in the United Kingdom. In India, the United States (US), and several other markets around the world, the Company manufactures and markets pharmaceutical formulations as branded generics and generics.

Its brands are used in areas such as cardiology, psychiatry, neurology, gastroenterology, dialcology, and respiratory medicine. It produces peptides, steroids, hormones, and anticancer APIs, among other things.

<sup>ii</sup> APIs and dosage forms are manufactured in 20 facilities in India, Israel, the United States, Canada, Hungary, Brazil, Mexico, and Bangladesh. Acamprosate Calcium is one of the company's API products. Alendronate Sodium, Amifostine trihydrate, Budenonide and Carvedilol.

### C. Conceptual framework of the study

The following conceptual model was developed as a result of the extensive research. The above model depicts the relationship between the firm's dividend payout determinants.

Payment of dividends, The dividend payout ratio is the proportion of a company's total net income paid out in dividends to its stockholders. The company keeps the money it doesn't pay out in dividends to stockholders to invest in growth. The amount that the company keeps is referred to as retained earnings.

$$\text{Dividend payout ratio} = \frac{\text{dividend}}{\text{net income}}$$

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The income statement of the company contains the net income shown in the formula.

When deciding whether to invest in a profitable company that pays dividends versus a profitable company with high growth potential, some people use this formula. In other words, this formula considers steady income versus reinvestment for potential future earnings, assuming the assumptions are true company has a net income.

### D. Alternative Formula

#### I.1-retention ratio

The retention and dividend payout ratios add up to one, or one hundred percent of net income. The idea is that the company keeps whatever money it doesn't pay out in dividends to reinvest in expansion. A business that pays no dividends, on the other hand, will have a 0 dividend payout ratio and a 1 retention ratio, indicating that it reinvests all of its net profits for expansion.

#### II. Dividend per share(DPS)/earnings per share(EPS)

In a "per unit" basis, the dividend distribution ratio calculation can also be rewritten. The dividend payout ratio will be determined by the same definition as dividends received separated by profits, or net income, whether the dividend per share and earnings per share are established.

The part of a company's profit assigned to each outstanding share of common stock is called earnings per share (EPS). Earnings per share is a metric that measures a company's performance.

$$\text{EPS} = \frac{\text{net profits} - \text{preferred dividend}}{\text{weighted average number of shares outstanding}}$$

The amount of net profits returned as a proportion of shareholders' equity is known as return on equity (ROE). Return on equity (also known as "return on net capital" [RONW]) is a formula for assessing a company's viability by revealing how much value it produces from the capital spent by its shareholders.

ROE is expressed as a percentage and calculated as:

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

The cumulative net income is for the entire fiscal year (before dividends paid to common stockholders but after dividends to preferred stock.) Preferred shares are not included in the equity of the shareholders.

Return on assets (ROA) is a measure of a company's profitability in relation to its overall assets. The return on assets (ROA) informs a manager, creditor, or analyst how successfully a company's management is using its assets to earn income. The return on assets (ROA) is expressed as a percentage and is measured as follows:

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$$

## II. LITERATURE OF THE STUDY

Pruitt and Gitman (1991) investigated and discovered that risk is a significant determinant of a company's dividend strategy. They came to the conclusion that a company with reasonably steady profits would always forecast its potential earnings fairly accurately. They say that such a company is more likely to pay a higher proportion of its profits than a company with fluctuating profits.

Within a 6-year timeframe, Amidu and Abor (2006) investigated the determinants of dividend pay ratio on the platform of financial statements of approved firms in the African exchange. The findings show that dividend pay ratio has a significant positive relationship with earnings, cash flow, and tax, as well as a significant negative relationship with risk, institutional ownership, growth, and market value to book value.

According to Farsio et al. (2004), there is no long-term association between dividends and earnings, and reports that affirm this relationship are focused on brief time spans, making them confusing to investors. They suggested three scenarios in which the long-term relationship between dividends and potential earnings will be negligible.

According to Lie (2005), companies with higher payouts have more competitive stability and experience optimistic parallel revenue shocks and lower income volatility, however there is no proof of corresponding efficiency changes. His research found that companies that raise payouts have better operating income fluctuations in the past than companies that don't. The variance continues to fall. This can be explained by the fact that as managers assume the likelihood of maintaining the existing amount of profits is high, they maximise the firm's payout. Dividend-cutting businesses, on the other side, also seen greater historical uncertainty than other companies, and this volatility is growing.

'The theoretical concepts underlying the dividend policy and its effect on companies can be defined either in terms of dividend irrelevance or dividend significance theory,' according to Modigliani and Miller (1961). As a result, in a world without taxation or transaction costs, dividend policy has little impact on the cost of capital and the valuation of companies. This shows that since buyers will establish some income trend by selling and purchasing shares, the anticipated return needed to entice them to keep the firm's shares is unchanged by how dividend dividends and new equity issues are bundled. It is to be observed that a firm's assets, investments opportunities, expected future net cash flows and cost of capital are not affected by the choices of dividend policy.

Tahir and Raja (2014) used regression and correlation to identify the best fitting model for the DP and research its effect on SW in their study titled "Impact of dividend policy on shareholders' income" of Pakistani oil and gas exploration firms from 1999 to 2006. The indicator variables were dividend payout ratio (DPR), price earnings ratio (PER), and book value to market value of equity (BV/MV) ratio, while the response variable was keeping time yield. On all of the companies, the results revealed an association between predictor variables and response variables.

The Pakistani oil and gas industry paid dividends on a regular basis, but there was volatility in the stock market, which resulted in inefficient holding period returns because firm share prices were not constant and fluctuated, and the study showed that dividend payout ratio had no meaningful association with holding period yield.

Kumaresan (2014) based on the top ten companies in the hotel and travel sectors in Sri Lanka from 2008 to 2012 in a report titled "Effects of dividend policy on shareholders' wealth: A study of listed firms in the hotels and travels market of Sri Lanka." Return on equity (ROE), dividend payout ratio (DPR), dividend per share (DPS), and retention ratio were used as indicator variables, while shareholders' capital (EPS) was used as an answer variable (RR).

The data obtained from the top ten listed companies in the hotel and travel sectors was analysed using correlation and regression. The research discovered a positive relationship between return on equity (ROE), dividend per share (DPS), and dividend payout ratio (DPO) and shareholders' wealth (SW) of the selected companies in Sri Lanka's hotel and travel sectors, as well as a negative relationship between retention ratio and shareholders' wealth.

## III. OBJECTIVE OF THE STUDY

For the analysis, the following goals were chosen.

- A. To establish a connection between the determinants of dividend payment for Indian pharmaceutical companies.
- B. To assess the effect of dividend payout determinants on pharmaceutical company dividend payouts in India.

## IV. METHODOLOGY

The methodology section consists of the sample size and data collection sources, different model used and the definition of the different variables used in the study.

**V. DATA COLLECTION SOURCES AND SAMPLE SIZE AND PERIOD OF THE STUDY:**

Data for this study was gathered from the Bombay Stock Exchange (BSE) website which made the analyzed results, as well as the Moneycontrol home site individual company websites' balance sheet analysis reports. The study's survey included the pharmaceutical industry and one corporation (sun pharma ltd), and data was gathered annually for a total of fifty years from 2004 to 2018.

Table 1

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
Basic EPS (Rs.)	-2.1	-0.1	-4.5	-6.1	-13.7	5	16.4	13.4	43.39	61.65	48.96	32.52	24.84	16.83	26.56
Book Value [ExclRevalReserve]/Share (Rs.)	82.4	87.58	89.27	109.78	35.77	75.21	76.07	64.51	276.07	248.72	203.15	126.58	78.8	59.51	91
Net Profit Margin (%)	-6.24	-0.29	-14.09	-18.38	-99.99	21.23	42.27	44.52	48.7	46.02	42.81	37.82	35.71	31	29.19
Return on Networth / Equity (%)	-2.5	-0.1	-4.99	-6.48	-38.18	6.63	21.54	20.71	15.71	24.78	24.1	25.68	31.51	28.28	29.19
Return on Capital Employed (%)	3.77	0.9	-4.23	-5.58	-27.91	6.38	20.92	20.29	15.37	24.2	23.01	17.41	13.97	10.53	21.71
Return on Assets (%)	-1.45	-0.06	-3.13	-3.93	-20.44	5.58	18.58	18.19	13.87	20.55	18.71	16.24	12.79	9.67	17.15
Total Debt/Equity (X)	0.34	0.23	0.26	0.24	0.33	0.01	0.01	0.01	0.01	0	0.02	0.44	1.19	1.64	0.37
Asset Turnover Ratio (%)	23.35	22.68	22.27	21.41	20.44	26.3	43.97	40.85	28.48	44.65	43.71	42.95	35.81	31.18	58.75
Current Ratio (X)	0.56	0.58	0.6	0.49	1.4	3.37	3.9	5.97	2.65	2.92	2.87	8.43	7.35	6.6	1.59
Dividend Payout Ratio (NP) (%)	-161.29	-1053.76	-22.42	-48.97	-10.98	100.24	25.92	26.19	31.69	22.3	21.44	20.67	22.17	22.27	24.46
Dividend Payout Ratio (CP) (%)	-1279.24	60.25	-39.49	-88.75	-11.39	85.95	24.82	25.03	29.41	21.31	20.32	19.25	20.37	20.01	22.33
Earnings Retention Ratio (%)	261.29	1153.76	122.42	148.97	110.98	-0.24	74.08	73.81	68.31	77.7	78.56	79.33	77.83	77.73	75.54
Enterprise Value (Cr.)	125484.6	169644.3	202702.4	216735.1	121019.8	84360.34	57690.01	44552.43	36908.42	21797.12	24534.86	20251.2	16608.91	9671.43	6280.42
Retention Ratios (%)	261.29	1153.76	122.42	148.97	110.98	-0.24	74.07	73.8	68.3	77.69	78.55	79.32	77.82	77.72	75.53

<https://www.moneycontrol.com/india/stock/pricequata/pharmaceutical/sunpharma>.

**A. The Model to be Used**

In this study used fifteen years financial data on earning per share, return on assets and return on equity of Sun pharma company's. On the basis of the objective of the study used auto regression model. It's a time series model that used observation from previous year time period steps as input to regression equation to predict the value at next time steps for this reasons used AR model.

$$y_t = b_1x_1 + b_2x_2 + b_3x_3 + e_{it}$$

y=dividend payout

x1=earnings per share(EPS)

x2=return on equity(ROE)

x3=return on assets(ROA)

ei= error portion of the model.

t=time period of the model (15 years)

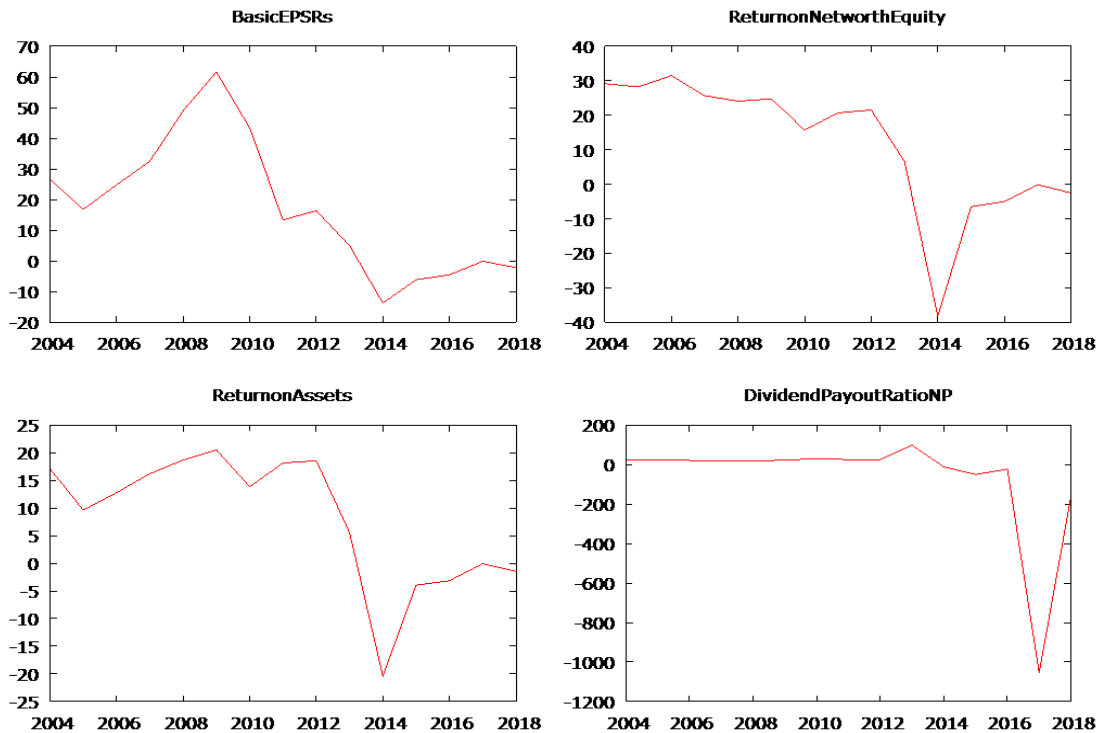
**B. Analyze and Finding**

Table 2

	Mean	Median	Minimum	Maximum
BasicEPSRs	17.537	16.400	-13.700	61.650
ReturnonNetworth~	11.725	20.710	-38.180	31.510
ReturnonAssets	8.1547	12.790	-20.440	20.550
DividendPayoutRa~	-65.338	22.170	-1053.8	100.24
	Std. Dev.	C.V.	Skewness	Ex. kurtosis
BasicEPSRs	22.126	1.2617	0.47202	-0.75233
ReturnonNetworth~	19.182	1.6359	-1.1888	0.88897
ReturnonAssets	11.755	1.4415	-0.96810	0.16438
DividendPayoutRa~	279.13	4.2721	-3.2477	9.0512

Table -2 shows the descriptive statistic of the studies, considered the four variables of the studies which were related to the company's performance. In descriptive statistic calculated mean, media, stander deviation, covariance and skewness and kurtosis. In case of basic earnings per share mean and median value are 17.53 and 16.40, and stander deviation value is 22.12 with consideration to the mean value. Also considered the covariance, skewness and kurtosis measured for magnitude of how far from normal distribution. On the other hand, same interpretation are there for rest of three variable.

Table 3



If consider all the variable in a periodical trend way, some of the scripture clearly said that earning per share gradually increase from 2004 to 2009 but after unexpected down still 2018. And return on equity gradually decrease but in 2014 unprecedented down after that again gradually increase till 2018. And return on assets also like same trend of return on equity. But for the dividend payout the growth like flat from 2004 to 2016 and suddenly for the year 2017 down trend and after next financial year its recover the position, which is dependent variable in this study. In the year 2014 EPS, ROA and ROE respectively same trend except the dependent variable but all variable are tends to negative direction towards. According to the time trend graphical presentation one thing cleared that in the year 2014 why those variable trend low and also conclude that it may some relation between of them. In this study don't search the exact reason behind but it's clear that the time effect exist during the period which consider of the study.

Table 4

Cochrane-Orcutt, using observations 2005-2018 (T = 14)

Dependent variable: DividendPayoutRatioNP

rho = -0.623

	Coefficient	Std. Error	t-ratio	p-value	
Const	750.709	215.588	3.482	0.0069	***
BasicEPSRs	-6.28048	4.11441	-1.526	0.1612	
ReturnonNetworthEquity	-31.9357	9.57763	-3.334	0.0087	***
ReturnonAssets	44.2215	15.5103	2.851	0.0191	**
Time	-86.0930	20.2232	-4.257	0.0021	***

Mean dependent var	-71.75214	S.D. dependent var	288.5175
Sum squared resid	456895.1	S.E. of regression	225.3134
R-squared	0.577828	Adjusted R-squared	0.390196
F(4, 9)	6.028080	P-value(F)	0.012169
Rho	-0.439940	Durbin-Watson	2.820090

Above the table shows the fit of the model and also shows the coefficient every variable which consider in this study with the impact of independents variable of dividend payout. 'rho' indicated and measure the strength of association between the variable in hear -0.623 means negative correlation with the considered period of the time. Above the study conducted fifteen year of periodical data which Durbin- Watson value is 2.82 which indicated that no autocorrelation are there. And the independent variables has ability to explain of independent variable, on the opposite site fitness of model appropriately green signal, because R's value more than 50% and adjusted R's square value is also logical position with compare to the R's square value. And p's value is less than .05 with connection of F's statistic. All above value supported that the model is appropriate for explain of the association between dependent variable and independent variable.

The coefficient value of ROE is -31.96, if the value of dividend payout increased one percent the roe decrease -31.96 and other condition remain constant. So in this study, return on equity negatively impact on dividend payout with consideration of the existing matters of the study like time period of the study, sample of the study etc. on the other hand in accounts of the figure of coefficient above told us highly positive relation on dependent variable. If the values of dividend payout increase one unit the ROA also increase 44.22 units. Time an importance considering factor in this study but coefficient valuation same explication like ROE. In account, on the statistical figure with corresponded the P's value all variable indicated that highly significant except the basic EPS.

## VI. CONCLUSION

All the paper covered on the consideration of selected objective of the study, firstly the coefficient of existing variable indicating that in case of, EPS and ROA has negatively association on dependent variable and on the other hand in case of ROE has positively association on dependent variable with consideration of other event constant of the exiting study. And secondly the entire variable is significant for this study but except EPS.

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<sup>i</sup> <https://www.jstor.org/stable/2487787>

<sup>ii</sup> (2018, April 1). . Retrieved from <https://www.ibef.org/industry/research-development-india/showcase/sun-pharma>



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