

## ANALYZING DIVIDEND POLICY DETERMINANTS IN PUBLIC SECTOR POWER CORPORATIONS: A CASE STUDY OF POWER GRID

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### Abstract

The analysis of management of earnings primarily focused on the dividend decision and retention of profit policy in the companies under study. The dividend decision by any company is one of the crucial financial decisions having a long-term impact on future financial and business growth of the company. While making the dividend decision companies' attention is not to determine the amount of dividend but to determine the level of internal financial resources and also at the same time, to maximize the wealth of shareholders.

In present study it has been tried to investigate the companies' level factor influencing the dividend and the retained earnings decisions of selected public sector power company, Powergrid.

Keywords: **Dividend**, Profitability, Liquidity, Leverage, Size, Risk

**Introduction:**

Proper and efficient management of earning helps in maintaining appropriation of earnings of the company and also helps in providing suitable amount of dividend to shareholders. In lack of proper management of earnings, a company may loss its value as well the faith of the stockholders.

The analysis of management of earnings primarily focused on the dividend decision and retention of profit policy in the companies under study. The dividend decision by any company is one of the crucial financial decisions having a long-term impact on future financial and business growth of the company. While making the dividend decision companies' attention is not to determine the amount of dividend but to determine the level of internal financial resources and also at the same time, to maximize the wealth of shareholders. Since the dividend irrelevance argument put forth by Miller and Modigliani (1961), dividends with core topic became a contentious area of finance. Indeed, the major financial issues, such as capital structure theories, mergers and acquisitions, asset pricing, and capital budgeting decisions etc., are directly related to the companies' dividends policy and the views regarding how and why firms retained the profit. The determinants of firms' dividend policies and that of firms' retention of profit help us to know the dividend puzzle to some extent.

In present study it is tried to investigate the companies' level factor influencing the dividend and the retained earnings decisions of selected public sector companies. In this chapter, the objective is to know the determinants of the Dividend Payment decisions and to identify the determinants of retained earnings in the selected public sector companies.

The study is focused on to identify the factors influencing the dividend payout of the companies under study. For the purpose the regression analysis has been used. Dividend payout ratio has been taken as the dependent variable whereas Profitability, Risk, Liquidity, Leverage, Investment opportunity, and Dividend Distribution Tax are taken as independent variable based on survey of existing literature.

**Objective of the Study:**

The objective is to know the determinants of the Dividend Payment decisions and to identify the determinants of retained earnings in the public sector steel company i.e. POWERGRID.

**Hypothesis of the study:**

H<sub>0</sub>: there is no significant relationship between Dividend Policy and the factors taken in this study.

H<sub>1</sub>: there is no significant relationship between Dividend Policy and the factors taken in this study.

**Hypothesis Testing Technique:**

OLS regression analysis has been used to analyze those variables that affect the dividend policy. The generalized form of the POLS regression models is specified as:

$$Y = \alpha + \sum \beta X_{it} + e_{it}$$

Where, Y is the dependent variable. In this study dividend policy represented by Dividend Pay-out Ratio has been used as dependent variable.

$\alpha$  is the constant intercept of the equation,  $\beta$  represents the coefficients for the explanatory variables in the estimated model, X is the vector of explanatory variables in the estimated model,  $e_{it}$  is the error term and  $\Sigma$  is the summation sign.

Accordingly, the following regression model has been used to analyze determinants of dividend policy in the selected companies.

$$DPR = \alpha + \beta_1 \text{Size}_{it} + \beta_2 \text{Prof}_{it} + \beta_3 \text{Risk}_{it} + \beta_4 \text{LIQ}_{it} + \beta_5 \text{LEV}_{it} + e_{it}$$

Where, DPR = Dividend Pay-out Ratio,  $\alpha$  = Constant,

$\beta_1, \beta_2, \dots$  = beta coefficient,

$\text{Size}_{it}$  = Size company 'i' in time 't' which is measured in terms of log of Total Assets,

$Prof_{it}$  = Profitability of company ‘i’ in time ‘t’ in terms of ROA

$Risk_{it}$  = Risk of company ‘i’ in time ‘t’ measured in terms of PE Ratio

$LIQ_{it}$  = Liquidity of company ‘i’ in time ‘t’ represented by Current Ratio,

$LEV_{it}$  = Leverage of company ‘i’ in time ‘t’ represented by Debt-Equity Ratio,

$e_{it}$  = Error Term.

### Description and Analysis of Variables

The brief description of the variables used in the regression model and their trends and summary in companies under study are as follows:

**Table 1: Descriptive Statistics of Variables**

Year ending March 31 <sup>st</sup>	DPR	Total Assets (₹ in crores)	ROA	Current Ratio	Debt Equity	P/E Ratio
2012	30.01	90,208.35	3.6	0.56	2.16	15.10
2013	30.06	1,11,133.56	3.81	0.41	2.48	11.30
2014	30.01	1,39,589.07	3.22	0.46	2.31	11.40
2015	21.01	1,58,300.88	3.14	0.36	2.37	15.00
2016	20.05	1,78,428.92	3.37	0.40	2.39	12.20
2017	6.95	1,94,679.46	3.86	0.45	2.26	13.70
2018	15.55	2,12,905.75	3.86	0.46	2.27	12.40
2019	45.42	2,46,473.00	4.03	0.56	2.29	10.20
2020	28.84	2,55,549.66	4.23	0.63	2.15	7.36
2021	57.15	2,54,331.93	4.69	0.84	1.88	9.62
<b>Average</b>	28.51	<b>1,84,160.06</b>	<b>3.78</b>	<b>0.51</b>	<b>2.26</b>	<b>11.83</b>
<b>MIN</b>	6.95	<b>90,208.35</b>	<b>3.14</b>	<b>0.36</b>	<b>1.88</b>	<b>7.36</b>
<b>MAX</b>	57.15	<b>2,55,549.66</b>	<b>4.69</b>	<b>0.84</b>	<b>2.48</b>	<b>15.10</b>
<b>C.V. (%)</b>	50.62	<b>32.22</b>	<b>12.57</b>	<b>27.84</b>	<b>7.33</b>	<b>20.46</b>

**Source: Calculated from data collected through annual reports of POWERGRID**

**(a) Dividend Payout Ratio (DPR)**

Dividend payout ratio is the ratio of total annual dividend paid to the profit after tax and is widely used as a proxy of dividend policy of a company. In the model DPR is used as dependent variable.

PowerGrid's DPR has risen from 30.01 percent in 2012 to 57.15 percent in 2021. PowerGrid's DPR was cut to 6.95 percent in 2017 from 20.05 percent in 2016. For the study period, PowerGrid's average DPR was 28.51 percent with C.V of 50.61%. It shows that the company has retained more of its profit for expansion and other activities and focused less on dividend distribution but in later part of the study company has adopted a more liberal dividend policy.

**(b) Size**

The larger firms have higher proportion of institutional shareholdings, and, therefore, they have easy access to capital market, which lead them to pay higher amount of dividend.

During the research period, the total assets of PowerGrid become almost thrice. It increased from ₹90,208.35 crores in 2012 to ₹2,54,331.93 crores in 2021. The entire asset worth fluctuated between ₹90,208.35 crores and ₹2,55,549.66 crores. During the study period, PowerGrid's total assets averaged ₹1,84,160.06 crores. The largest total asset growth was 25.60 percent in 2014, and there was just one year during the study period when ONGC's total assets fell by 1.84 percent in 2020.

**(c) Profitability**

The dividend decision of any firm is highly dependent on its profitability. Lintner (1956), in his study, has found that the net earning is a major factor that affects the dividend decision of a firm. In this study Return on Assets (ROA) has been used as proxy of profitability.

In terms of ROA, PowerGrid outperformed ONGC. The return on Assets (ROA) of PowerGrid improved from 3.60 percent in 2012 to 4.69 percent in 2021. ROA decreased steadily from 2013 to 2015, dropping to 3.81 percent, 3.22 percent, and 3.14 percent, respectively. However, the company continued to grow throughout the

research period. PowerGrid's average ROA was 3.78 percent, with a range of 3.14 to 4.69 percent. The most significant shift in ROA occurred in 2014 when it fell by 15.49 percent.

#### **(d) Risk**

Risk may be defined as the uncertainty in the firm's current and future earnings. The Price-Earnings (PE) Ratio is used as a proxy for risk.

#### **Price -Earnings (PE) Ratio**

The PE Ratio of PowerGrid was 15.10 times in 2012 but in 2013 and 2014 the PE ratio was reduced to 11.30 times and 11.40 times respectively. In 2015 the ratio was again reached to 15 times but again it declined to 12.20 times in 2016. In very next year it again increased to 13.70 times. After 2017 the PE ratio of the company started declining and reached to its minimum of 7.36 times in the year 2020. In 2021 the PE ratio of the company increased to 9.62 times. The PE ratio of PowerGrid did not show a linear trend during the period under research and hence can be treated as comparatively riskier. The average of PE ratio of the company was recorded 11.83 times with a C.V. of 20.46 percent.

#### **(e) Liquidity**

There may be a situation arises that despite of having enough profits to declare the dividends in a company but it may not have the sufficient cash in hand/bank to pay the dividends. We have used current ratio to measure the liquidity position of company. The current ratio is a liquidity ratio that assesses a company's capacity to pay short-term or one-year obligations.

#### **Current Ratio = Current Assets/Current Liabilities**

**(f)** PowerGrid's Current Ratio has risen from 0.56 times in 2012 to 0.84 times in 2021. The Current Ratio of ONGC fluctuated between 0.36 times and 0.84 times during the study period. During the study period, the average Current Ratio of PowerGrid was 0.84 times and the C.V. was recorded 27.84 percent. It shows that the firm is following hedging approach.

**(g) Leverage**

The debt-equity ratio is a measure financial leverage and can be assess by the total outsiders' long-term funds divided by total shareholders' or owners' contributions in companies' capital structure. Simply put, the debt-equity ratio is the ratio of a company's total long-term debt to its entire equity capital.

A simple formula can be used to compute it:

$$\text{Debt/Equity Ratio} = \text{Total Long-Term Debt/Shareholders' Fund}$$

PowerGrid had a major portion of debt in investments as it was 2.16 times in 2012 and it remained more than 2 times throughout the study period except in last year of the study 2021 in which the debt equity ratio was recorded 1.88 times. The maximum Debt/Equity Ratio of the company was recorded 2.48 times in the year 2013. It shows that company is highly leveraged and tried to rip out the benefit of trading on equity. The average Debt Equity Ratio was recorded 2.26 times with C.V. of 7.33 percent.

**(h) : Empirical Results**

This part of the study deals with the empirical results on the determinants of dividend policy of POWERGRID:

*Table 2: Regression Statistics*

Multiple R	0.971605
R Square	0.944016
Adjusted R Square	0.874036
Standard Error	5.121135
Observations	10

From the table it can be seen that the independent variables in regression model that is size of company, profitability of company, liquidity position of the company, leverage of the company and risk factor involve in the company has contributed to 87.40 percent in variation of dividend pay-out ratio in other word they are responsible about 87 percent for dividend policy of the companies concern as shown by adjusted R<sup>2</sup>.

Table3: ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	1768.922	353.7843	13.48982	0.012953
Residual	4	104.9041	26.22602		
Total	9	1873.826			

Table makes it clear that the significance value is less than 0.05 and hence the null hypothesis has been accepted at 5% level of significance. So, it can be concluded that the differences in DPR of the company under study are statistically insignificant during research period. So, the dividend policy adopted by the company under study is significantly differ to other variables

**Table4: Determinants of Dividend Payout Ratio**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-604.724	151.5379	-3.99058	0.016257
Total Size	7.77E-05	5.31E-05	1.461864	0.21759
Profitability	-24.201	8.512691	-2.84294	0.046728
Liquidity	388.8406	69.37848	5.604629	0.004977
Leverage	209.419	47.69123	4.391143	0.011772
Risk	3.255062	1.572109	2.070506	0.107169

From the table it can also be observed that Size, Liquidity, Leverage and Risk have a positive impact on dividend payout ratio while Profitability affects inversely to the dividend pay-out ratio. However, from the value of t-stat and p-value it is found that profitability, liquidity and leverage are the significant factors among the selected variables that determine the dividend pay-out ratio in POWERGRID. All other variables are not significantly affecting to Dividend of the company.

## Conclusion

The present study examines the determinants of dividend policy for POWERGRID during the period 2011-12 to 2020-21. It is found that during the study period POWERGRID has consistently distributed dividend. Throughout the study period Dividend Pay-out is inconsistent due declining of profit from the year 2015. Only in the year 2017 did the dividend payout ratio go below 10%, but since then, it has been steadily rising. From the empirical analysis it has been found that the variables have significant impact on dividend pay-out of the company. Only Size and Risk of the company have no significant impact on Dividend Pay-out of the firm. From the study it is proven that null hypothesis is rejected and alternate hypothesis is accepted.

Thus, it can be said that the dividend policy of POWERGRID is determined by a decision made by the company's management depending on the company's financial situation.

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