An Empirical Study on Factors Influencing on Dividend Payout in India with respect to NIFTY 50 Companies

Abstract

This article examined the factors influencing the dividend payout of Non financing and non-banking companies listed in NIFTY 50 India. Generating profit is one of the key characteristics of the successful firms. So, when these profits are attained firms distribute profits with their shareholders (investor's) in the form of dividends. So here we are going to see the various factors which are influencing the dividend payout in India's NIFTY Fifty. This study covers for the tenure of 5 financial years (2018 - 2023). Various theoretical models have been developed by academicians and researchers to empirical examine the impact of factors on dividend payout ratios of different companies, and it is also suggested that managers should use these models while making decision for dividend payments, Grullon et al (2002).

So, in this paper we are going to find the various factors influencing the dividend payout, and we are also going to draw the conclusion by using Descriptive Statistics, Correlation, Simple Regression and Panel Data Analysis. Companies with higher ROE tend to exhibit higher dividend payout ratios, underscoring the role of profitability as a strong driver of dividend distribution policies. Conversely, the Debt-to-Equity Ratio (DE Ratio) consistently demonstrates a negative relationship with DP Ratio, implying that companies with higher debt levels relative to equity tend to have lower dividend payout ratios. This emphasizes the impact of financial leverage on dividend decisions, as firms with substantial debt obligations prioritize debt servicing over dividend payments.

Keywords: Dividend Pay-out ratio, Growth rate, Liquidity, NIFTY 50, and Profitability.

1. Introduction

This study delves deep into the complex world of corporate finance, seeking to unravel the intricate web of factors that influence dividend payout decisions among the elite NIFTY 50 companies. India's NIFTY 50 index, a reflection of the country's economic prowess, comprises the fifty most prominent companies listed on the National Stock Exchange (NSE). These firms stand as giants in their respective industries, shaping the nation's economic destiny. Yet, despite their prominence, there is a veil of mystery surrounding their dividend distribution practices.

Dividends, the lifeblood of shareholder returns, hold a pivotal role in the financial strategy of any corporation. In the Indian context, they play an even more significant role, given the country's diverse and dynamic economic landscape. Against this backdrop, our empirical study sets out to answer a compelling question: What are the factors that drive dividend payout decisions among the NIFTY 50 companies? To embark on this intellectual journey, we traverse through the corridors of India's corporate boardrooms, engage with seasoned financial experts, and crunch vast datasets. We examine a plethora of variables, from profitability and growth prospects to liquidity constraints and regulatory influences. Each variable represents a thread in the tapestry of India's corporate financial landscape, and we aim to weave them together to create a comprehensive understanding of dividend payout determinants.

As we venture further into the heart of our study, we encounter both the expected and the unexpected. Some firms, despite their impressive financial performance, seem to have a reluctance to share their earnings with shareholders, while others, in less prosperous situations, are more generous with their dividends. The study explores the underlying motivations behind these seemingly enigmatic behaviours. We also navigate the labyrinth of India's financial regulations and economic trends, attempting to discern how government policies, market conditions, and investor sentiment intertwine to shape dividend payout decisions. Is it a matter of aligning with shareholder interests, a strategic capital allocation choice, or a response to external market pressures? These are the questions that we endeavour to answer.

In this empirical journey, we hope to uncover not just statistical correlations but also the stories that lie beneath the numbers—the narratives of boardroom discussions, investor expectations, and economic shifts that guide dividend distribution among the NIFTY 50 companies. Ultimately, this study seeks to shed light on the intricate dance of factors influencing dividend payout decisions in India's dynamic corporate landscape, providing valuable insights for investors, policymakers, and financial practitioners alike.

2. Literature Review and Research Gap

2.1. Literature Review

The extensive body of research conducted in the field of dividend payout determinants has offered valuable insights into the complex decision-making process that companies undertake when distributing profits to their shareholders. This literature review synthesizes findings from a range of studies spanning different industries and geographical regions to provide a

comprehensive understanding of the factors influencing dividend policies. Researchers have examined a myriad of variables, including profitability, cash flows, leverage, firm size, growth prospects, and ownership structure, among others, to unravel the intricate web of determinants impacting dividend payout ratios. While some studies have explored the nuanced dynamics within specific sectors, others have taken a global perspective, considering the influence of macroeconomic factors and regulatory changes. This review sets the stage for a deeper exploration of dividend payout determinants in the context of companies in India, shedding light on opportunities for future research in these dynamic industries.

Recently Nathani and Gangil (2019), investigated the factors that affects dividend payouts of Pharmaceuticals and Automobiles companies listed on NSE, India. Their study covered the period of ten years, which was from 2006 -2007 to 2015-2016. For doing the analysis Static panel data model was used. From the previous study factors like cash flow, return on equity, profitability, leverage, tax, opportunities for investment, retained earnings, size of company and sales growth of the company were identified which has impact on dividend payouts of the companies. Their result indicated that cash flow, retained earnings, tax and investment opportunities has a significant impact on dividend payouts of Automobile sector and debt, profitability, sales growth and retained earnings has a significant impact on dividend payouts of pharmaceutical sector.

Wara (2015), examined the effects of 6 factors which is said to influence the dividend payout ratios of companies in Kenya, by using Tobit regression model. It was found that size of firm, debt and growth rate negatively impacts the dividend payout ratios and earnings positively affects the dividend distribution ratio. Ritha & Koestiyanto (2013), conducted an analysis to analyze the factors influencing the dividend payout ratios in the corporations listed on the stock exchange during the 2007 – 2009 period. The outcomes indicated that dividends payout ratio has a positive effect of leverage. Profitability was identified as having a negative and important impact on dividend payment. Growth performance of the business displayed negative and major impact on dividend payment.

Shahteimoari Collins et al. (2013) investigated the impact of investment opportunity set and corporate financing in the industrial products sector. The sample consists of 62 firms, which were listed on the main board of Malaysia. Tools like Tobin's Q were used to measure investment opportunity set, financial leverage, and debt maturity. The study suggested that investment opportunity and debt maturity are the factors significantly influence Dividend

Payout. Profitability and risk play significant role in determining Dividend Payout in the industrial products sector of Malaysia.

Gill and Obradovich (2012) found a relationship between corporate governance, institutional ownership, and the decision to pay dividends in American service firms. A sample of 296 American firms listed on New York stock exchange for a period of three years was selected. The study applied a co-relational and non-experimental research design and indicated that the decision to pay dividends was a positive function of board size, CEO duality, internalization of the firm, a negative function of institutional ownership. Zahra (2012) investigated the impact of financial leverage operating cash flow and size of firm on the dividend policy (Case study of Iran). A sample of 74 firms has been selected and investigated. F-limer test, Hasman test and random effects model were used for analysis and the study found a negative relationship between financial leverage and Dividend Payout; positive relationship between operating cash flow, size of the firm and Dividend Payout.

Mistry (2011) attempted to ascertain the influence of the factors affecting dividend decision of Indian Cement Industry for a period from 2004-05 to 2008-09 based on secondary data of 28 out of 36 listed public firms listed NSE. The study found that significant increase in the selected factors influence the dividend decision rather than the factors which has resulted marginal or moderate increase. The study also found that the change in total assets (TA) and profitability affects dividend decision positively while change in liquidity, inventory turnover ratio, retained earnings affect dividend decision negatively.

Gill et al (2010), extended the study of Amidu & Abor (2006) and Anil and Kapoor (2008), by using it for examining the American service & manufacturing companies. Among other factors, they noticed that the dividend payout ratio, on a modified basis, namely the ratio among the cash dividend that the net cash flow produced by the company gave rise to findings that vary from those obtained as the dependent variable with the 'normal' dividend distribution ratio. They also concluded that relationship of dependent and independent variable is different in service and manufacturing industry.

Lightner (2008), Lightner studied the relationship of tax with dividend payout, and result showed that, When the tax rate rises, corporation increase stock repurchase and decrease the dividends payout. Tax level and payout of dividend vary with proportion of individual investment. Other factors such as tax and sales growth did not have any impact on profitability ratio. This research result shows that profitability ratio did not have any relation

with sales growth. It has been concluded that profitability is an important factor that affects dividend payout ratios. This finding is consistent with Denis and Osbovo (2008).

Truong & Heaney (2007), investigated the effect of profitability and investment opportunities on dividend payout ratio and found out that companies prefer to pay dividends when profit is huge and opportunities for investment is limited. Similarly, Denis and Osobov (2008), examined the impact of profitability, size of business, opportunity for investment, life cycle and problem of agency on dividend distribution ratio by using logit regression. Their result showed that profitability, size of business opportunity for investment, life cycle and opportunity of growth influence dividend distribution ratio. Similarly, Aivazian, Booth & Cleary (2003), observed that profitability has impact on both developing market companies and U.S Companies and higher return on equites leads to higher dividend distribution.

Baker and Powel (2000) concluded that NYSE (New York Stock Exchange) listed firms focus on current and future level of earnings, pattern of past dividends for setting their dividend pay-out. The existing body of literature on Dividend Payouts of The Pharmaceutical Industry of NSE India tries to answer an appropriate factor that are influencing dividend payouts in India. In this Study, panel data method has been used and to verify this F- Limer has been used. T-statistics, probability and coefficient has also been calculated to study the Impact. After all these tests the results showed a significant and negative relationship between profitability ratio and dividend payout and cash flows (Independent variable) also and finding is consistent with Adam and Guyal (2000).

Miller & Merton established their proposition, but below a set of limitations assuming that Zero flotation, Zero taxes and transaction costs. Their independence will be observed between systematic information, dividend policy and equity costs. Most of the financial researcher and academics acknowledged this theory with a surprise because previous researches focused and suggested that share price and shareholder equity is affected if dividend policy is properly managed, similarly structure of a capital is affected by cash dividend Gordon (1959). Finally, after analysing the results, we can determine that profitability, liquidity, earning per share and size of the firm positively affects the probability of paying dividend so we fail to reject Null Hypothesis, whereas firm sales growth has negative impact on the probability of dividend payment so in case of sales growth we also fail to reject null hypothesis.

Lintner, J. (1956), Debate relating to determinants of dividend policy boosted up from work of Lintner (1956) when he took the interview of 28 managers in USA and identified that current earnings and last year dividend are most important determinants for USA firms. He also concluded that managers try to keep dividend stable and increase only when they sure to maintain it and mangers also avoids from dividend cuts.

2.2. Research Gap

Existing literature has made significant contributions to understanding dividend payout determinants in the context of Pharmaceuticals and Automobiles companies in India, there are several opportunities for future research to explore these factors in greater depth, consider Index-specific nuances, and account for evolving economic and market dynamics.

3. Research Methodology

3.1. Objectives

- To examine the corelation between dividend payout ratio and selected variables with respect NIFTY 50 companies in India.
- To analyse the impact on dividend payout by selected variables with respect NIFTY 50 companies in India.

3.2. Hypothesis

3.2.1. Correlation

H_0: There is no significant correlation exist between selected variables and dividend payout ratio.

H_1: There is a significant correlation between selected variables and dividend payout ratio.

3.2.2. Regression

H_0: There is no significant impact of the selected variables on dividend payout ratio.

H_1: There is a significant impact of the selected variables on dividend payout ratio.

3.3. Scope

The goal of this study is to understand why dividend payout fluctuate in India and the important factors influencing dividend payout. It will analyse the factors that are affecting the dividend payout in NIFTY 50, India. By examining the Current Ratios, Debt to Equity, Asset Turnover Ratio, 3yr CAGR sales, Basic EPS, Cash Flows, Dividend/Share of Non-Banking and Non-Financial companies. The data is only collected for a five-year period and 3yr CAGR sales. It is possible that the factors that impact the dividends in India may change over time. The study only considers a limited number of crucial factors. There may be other factors that also impact the dividend prices in India's Non-finance, non-Banking sector.

The study encompasses a period of five-year time frame, ranging from 2019 to 2023. The selection of a five-year research period, from 2019 to 2023, is driven by the need for current, comprehensive, and relevant data to explore the determinants of dividend payouts in the blue-chip companies of India. It allows for a deeper understanding of how these factors operate in the contemporary business and economic landscape while considering the impact of external events and policy changes. The research period covers a period of economic and market volatility, including events like the COVID-19 pandemic. Analysing dividend payout determinants during such economic disruptions can yield valuable insights on companies dividend policies.

3.4. Method

The study is focused to identify the factors that impact dividends in India, and the sample selected is NSE NIFTY 50 companies. Secondary data to be used for the purpose of the study and will be obtained from websites of the companies, NSE website and other financial websites. Data will be collected for five years. Correlation analysis and Regression analysis and Panel Data analysis will be used to analyse the data. We are using these this analysis on certain ratios that are Return on Net worth, Cash Flows, Current Ratios, Quick Ratio, Debt to Equity, Asset Turnover Ratio, Basic EPS, Dividend/Share, 3 Yr. CAGR Sales, Dividend Payout. A purposive sampling technique was employed, which involved selecting all companies from the Nifty 50 India except financial services companies, that is excluding Non-Banking and Non-Financing companies we have considered rest all the companies of Nifty 50.

3.5. Model and Variables

Regression Model

Dividend Payout Ratio = β_0 +β_1 Return on Equity+β_2 Current Ratio+β_3 Debt Equity Ratio+β_4 Asset Turnover Ratio+β_5 3-year CAGR +β_6 Total Assets.

Table 1: Variables and their measurement

Variables	**MEASUREMENT**
Dependent Variable	
Dividend payout ratio	Dividend paid/Net Income
Independent Variables	
Return on Equity (ROE)	Net Income / Shareholders' Equity
Current Ratio (CR)	Current Assets / Current Liabilities
Debt Equity Ratio (DE Ratio)	Total debt/shareholders' equity
Asset Turnover Ratio (ATR)	Net Sales / Average Total Assets
3 years CAGR	[(Ending Value/Beginning Value) ^ (1/N)]-1
Total Assets (TA)	Liabilities + Owner's equity

The selection of these variables in the context of studying dividend payout determinants is driven by their relevance in assessing a company's financial health, performance, and its

ability to distribute dividends to shareholders. ROE measures a company's profitability by evaluating how efficiently it generates earnings from shareholders' equity. A higher ROE indicates better profitability, which can influence a company's capacity to pay dividends. CR assesses a company's short-term liquidity and ability to cover its current liabilities with its current assets. A healthy CR suggests that the company has the resources to meet its short-term obligations, which can impact its dividend policy. DE Ratio reflects the proportion of a company's financing that comes from debt relative to equity. A lower DE Ratio indicates a lower financial risk, which can affect a company's willingness to distribute dividends.

ATR measures a company's efficiency in generating sales revenue from its total assets. A higher ATR may indicate more efficient asset utilization, potentially influencing dividend decisions. 3Yr CAGR assesses the compound annual growth rate of a company's key financial metrics over a three-year period. It provides insights into the company's growth prospects, which can be relevant to dividend policies. Total Assets represents the total value of a company's assets. It can be indicative of the company's size and scale, which can play a role in determining dividend distributions. These variables are chosen because they capture different aspects of a company's financial position, performance, and growth potential, all of which are critical considerations in shaping dividend policies. By examining these factors, researchers and analysts can gain a more comprehensive understanding of the determinants of dividend payouts in various industries and contexts.

4. Data Analysis

4.1. Financial Year 2022-2023

4.1.1. Descriptive Statistics

Table 2: Descriptive Statistics of selected variables for the period of one year (2022 - 23)

Statistics	*DPRatio*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	*TA*
Mean	0.450	20.035	1.716	0.717	1.614	25.518	11.272
Standard Error	0.047	2.794	0.205	0.167	0.506	2.265	0.191
Median	0.373	14.445	1.390	0.410	0.845	21.870	11.375
Mode	1.000	NA	0.890	0.000	0.830	15.600	9.580
Sta Deviation	0.297	17.671	1.298	1.059	3.200	14.326	1.207
Sample Variance	0.088	312.281	1.685	1.121	10.240	205.239	1.457
Kurtosis	-0.903	9.441	18.798	12.452	34.094	6.660	-0.322
Skewness	0.481	2.816	3.801	3.045	5.676	2.376	0.164
Range	1.000	93.220	7.990	5.730	20.450	69.590	5.247
Minimum	0.000	3.980	0.470	0.000	0.180	8.060	9.103
Maximum	1.000	97.200	8.460	5.730	20.630	77.650	14.350
Sum	18.009	801.380	68.640	28.670	64.560	1020.720	450.867
Count	40	40	40	40	40	40	40

(Source: Author’s calculations)

From the Table 2, it can be interpreted that, the mean DPRatio of 0.450 suggests that, on average, companies in the dataset are paying out 45% of their earnings as dividends. The wide standard deviation (0.297) and positive skewness (0.481) indicate that the distribution of DPRatio values is not normally distributed. It is right-skewed, meaning that there are likely a few companies with very high dividend payout ratios that are causing this skewness. The kurtosis value (-0.903) suggests that the distribution has thinner tails and is less peaked compared to a normal distribution. The mean ROE of 20.035 is relatively high, suggesting that, on average, companies in the dataset have a strong return on equity. The large standard deviation (17.671) indicates a wide dispersion of ROE values, with some companies having exceptionally high or low ROE. Positive skewness (2.816) suggests that there is a rightward tail, meaning that there are companies with extremely high ROE values that are influencing the distribution. Positive kurtosis (9.441) indicates heavy tails in the distribution, suggesting that there are outliers with very high ROE values.

The mean CR of 1.716 indicates that, on average, companies have a current ratio of 1.716, which is greater than 1, indicating good short-term liquidity. The low standard deviation (1.298) suggests that the CR values are less dispersed compared to ROE or DPRatio. Positive skewness (3.801) indicates that the distribution is right-skewed, with some companies having very high current ratios. High kurtosis (18.798) suggests that there may be significant outliers with very high current ratios. The mean DER of 0.717 indicates that, on average, companies have a relatively low level of debt compared to equity. The standard deviation (1.059) suggests some variability in the debt-to-equity ratios among the companies. Positive skewness (3.045) suggests a right-skewed distribution with some companies having high debt-to-equity ratios. High kurtosis (12.452) indicates a distribution with heavy tails and potential outliers with very high debt-to-equity ratios.

The mean ATR of 1.614 indicates that, on average, companies are generating Rs. 1.614 in revenue for every rupee of assets they have. The standard deviation (3.200) is relatively high, indicating variability in asset turnover among the companies. Positive skewness (5.676) suggests a right-skewed distribution with potential outliers having very high asset turnover ratios. High kurtosis (34.094) indicates a distribution with extremely heavy tails and significant outliers. The mean CAGR of 25.518 suggests that, on average, companies have experienced a compound annual growth rate of 25.518%. The standard deviation (14.326) indicates variability in growth rates among the companies. Positive skewness (2.376) suggests a right-skewed distribution with potential outliers having very high growth rates.

The negative kurtosis value (-0.322) suggests that the distribution has thinner tails compared to a normal distribution, but not as extreme as other variables.

The mean total assets are 11.272, which is the average size of companies in the dataset. The standard deviation (1.207) indicates relatively low variability in total assets among the companies. Positive skewness (0.164) suggests a slight right-skewed distribution with some companies having larger total assets. The range (5.247) between the minimum and maximum values is not very wide, indicating that the dataset does not include extremely large or small companies in terms of total assets. Overall, the statistics reveal significant variability, skewness, and potential outliers in several of the financial metrics, indicating that there is a diverse range of companies in the dataset with varying financial performance.

4.1.2. Correlation Analysis

Table 3. Pearson's corelation analysis between Dividend Payout Ratio and the selected variables for the one-year period.

Variables	*DP Ratio*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	*TA*
Dividend Pay out	1.0000						
ROE	0.4957*	1.0000					
Current Ratios	0.1102	0.0399	1.0000				
Debt to Equity (x)	-0.1969	-0.2451	0.4631*	1.0000			
Asset Turnover Ratio	0.1409	0.0750	-0.0044	-0.1621	1.0000		
3 Yr CAGR Sales (%)	-0.317*	-0.1485	-0.0813	-0.0189	-0.1375	1.0000	
Total Assets	-0.2043	-0.4081*	-0.3544*	0.0627	-0.1565	0.0533	1.0000

(Correlation Coefficients, using the observations 1 – 40; 5% critical value (two-tailed) = 0.3120 for n = 40)
(Source: Author's calculations).

The table 3 shows Pearson's correlation coefficients between the Dividend Payout Ratio (DP Ratio) and several other selected variables over a one-year period. There is a statistically significant positive correlation (0.4957) between the Dividend Payout Ratio (DP Ratio) and Return on Equity (ROE). This suggests that companies with higher ROE tend to have higher dividend payout ratios. There is a weak positive correlation (0.1102) between the Dividend Payout Ratio (DP Ratio) and Current Ratios (CR). However, this correlation is not statistically significant, meaning that the relationship may not be meaningful. There is a statistically insignificant negative correlation (-0.1969) between the Dividend Payout Ratio (DP Ratio) and Debt to Equity (DER). This suggests that companies with higher debt-to-equity ratios tend to have lower dividend payout ratios.

There is a weak positive correlation between (0.1409) the Dividend Payout Ratio (DP Ratio) and Asset Turnover Ratio (ATR). However, this correlation is not statistically significant. There is a statistically significant negative correlation (-0.317) between the Dividend Payout Ratio (DP Ratio) and the 3-Year Compound Annual Growth Rate of Sales (CAGR). This

suggests that companies with higher DP Ratios tend to have lower sales growth rates over the past three years. There is a weak negative correlation between (-0.2043) the Dividend Payout Ratio (DP Ratio) and Total Assets (TA). However, this correlation is not statistically significant. The correlations between DP Ratio and CR, ATR, and TA are weak and not statistically significant, indicating a lack of strong linear relationships between these pairs of variables.

4.2.2. Panel Regression

Table 4: OLS Regression Analysis. Dependent variable: Dividend Payout Ratio. (n = 40)

Particulars	Coefficient	Std. Error	t-ratio	p-value	R Squared	F Stat	P Valve
Constant	0.193753	0.540424	0.3585	0.7222			
ROE	0.00732021	0.00272287	2.688	0.0112*			
CR	0.0407111	0.0407055	1	0.3245			
DE Ratio	−0.0482430	0.0482526	−0.9998	0.3247	0.338495	2.814372	0.025289*
ATR	0.00552067	0.0136279	0.4051	0.688			
3 Yr CAGR	−0.00492255	0.00301383	−1.633	0.1119			
Total Assets	0.0169651	0.0421597	0.4024	0.69			

(Source: Author's calculations) (* significance @ 5 percent level)

The table 4 provides the result of an Ordinary Least Squares (OLS) regression analysis of the dependent variable Dividend Payout Ratio for the one-year period. The constant (intercept) is 0.193753, but it is not statistically significant as its p-value is high (0.7222). The regression analysis suggests that among the variables considered, only ROE has a statistically significant positive relationship with the Dividend Payout Ratio. This means that higher Return on Equity tends to be associated with higher Dividend Payout Ratios. None of the other variables (CR, DE Ratio, ATR, 3 Yr CAGR, Total Assets) appear to have statistically significant effects on the Dividend Payout Ratio in this analysis. The overall model is statistically significant (F-statistic p-value = 0.025289), indicating that there is at least one variable in the model that is statistically significant in explaining variations in the Dividend Payout Ratio. However, the R-squared value of 0.338495 suggests that the model explains only about 33.85% of the variation in the Dividend Payout Ratio, indicating that other factors not included in the model may also be influencing it.

4.2. Three Financial Years (2020 – 2023)

4.2.1: Descriptive Statistics

Table 5: Descriptive Statistics of the selected variables for the period of three financial years (2020 - 23)

Statistics	*DP Ratio*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	*TA*
Mean	0.4534	18.9767	1.7471	0.7002	16.5973	17.5523	11.1665
Standard Error	0.0296	1.6964	0.1016	0.0863	3.0866	1.2469	0.1116
Median	0.3780	16.2150	1.5050	0.3900	1.0900	15.5550	11.2775
Mode	0.0000	21.8000	0.9300	0.0000	0.7400	15.0200	10.0400

Stan Deviation	0.3247	18.5836	1.1134	0.9455	33.8124	13.6594	1.2223
Sample Var	0.1054	345.3515	1.2397	0.8941	1143.2764	186.5806	1.4940
Kurtosis	3.2243	8.8071	14.5459	8.4169	5.6702	4.6958	-0.4749
Skewness	1.2412	2.1966	3.1229	2.4469	2.4285	1.3198	0.1339
Range	2.0341	128.7900	8.0000	5.7300	164.0100	87.8400	5.4300
Minimum	0.0000	-25.6700	0.4600	0.0000	0.0100	-10.1900	8.9200
Maximum	2.0341	103.1200	8.4600	5.7300	164.0200	77.6500	14.3500
Sum	54.41	2277.20	209.65	84.02	1991.68	2106.27	1339.98
Count	120	120	120	120	120	120	120

(Source: Author's calculations)

A large amount of volatility is seen in key financial variables throughout the three-year period (2020-2023). The Dividend Payout Ratio ranges from 0 to 2.0341, with an average value of 0.4534. Return on Equity (ROE) ranges from -25.67% to 103.12%, with an average of 18.9767%. Current Ratios (CR) range from 0.46 to 8.46, with an average of 1.7471. Debt to Equity Ratios (DER) range from 0 to 5.73, with an average of 0.7002. Asset Turnover Ratios (ATR) range from 0.01 to 164.02, with a mean value of 16.5973. Sales are up 17.5523% over the past three years, while total assets are averaging 11.166. ROE and ATR have high standard deviations, indicating significant variability in financial performance and asset utilization efficiency, respectively. DP Ratio and CR have relatively low standard deviations, suggesting a degree of consistency in dividend payouts and liquidity positions. DER, CAGR, and TA have moderate standard deviations, indicating moderate variability in debt structures, growth rates, and total asset levels. The positive skewness and kurtosis values for all variables except total assets indicate a right-skewed distribution, implying that there may be companies with exceptionally high values.

4.2.2. Correlation

Table 6. Pearson's corelation analysis between Dividend Payout Ratio and the selected variables for the three-year period.

Variables	*DP Ra*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	TA
Dividend Pay out	1.0000						
ROE	0.4935*	1.0000					
Current Ratios	0.0490	0.0901	1.0000				
Debt to Equity (x)	-0.2599*	-0.2751*	0.2728*	1.0000			
Asset Turnover Ratio	0.2582*	-0.0093	0.0171	-0.0782	1.0000		
3 Yr CAGR Sales (%)	-0.1765	0.0715	0.1237	0.0520	-0.2812*	1.0000	
Total Assets	-0.2286*	-0.3852*	-0.4079*	0.1269	-0.1338	-0.1070	1.0000

(Correlation Coefficients, using the observations 1:1 - 40:3; 5% critical value (two-tailed) = 0.1793 for n = 120)
(Source: Author's calculations).

The table 6 shows Pearson's correlation coefficients between the Dividend Payout Ratio (DP Ratio) and several other selected variables over a one-year period. The Pearson's correlation analysis between the Dividend Payout Ratio (DP Ratio) and the selected financial variables reveals noteworthy insights. First, there is a moderately strong positive correlation between

ROE and DP Ratio, signifying that companies with higher Return on Equity tend to have higher dividend payouts, a relationship of significance at the 5% level. Conversely, a moderate negative correlation exists between Debt to Equity (DER) and DP Ratio, indicating that firms with higher debt levels relative to equity tend to have lower dividend payouts, which is also statistically significant. Furthermore, there are weaker correlations between DP Ratio and other variables such as Current Ratios, Asset Turnover Ratios, 3-Year CAGR Sales, and Total Assets, suggesting less pronounced associations. These findings underscore the importance of ROE and DER as key determinants of dividend policy, with statistical significance highlighting the reliability of these relationships within the dataset.

4.2.3. Panel Regression

Table 7: Fixed-effects Panel Regression; Dependent variable: Dividend payout ratio Included 40 Cross-sectional units and Time-series length is 3. (n = 120)

Particulars	Coefficient	Std. Error	t-ratio	p-value	R Squared	F Stat	P Valve	DW Test
Constant	−0.728950	2.25005	−0.3240	0.7469				
ROE	0.0013972	0.002921	0.4782	0.6339				
CR	0.0323492	0.061128	0.5292	0.5982				
DE Ratio	−0.0073627	0.092609	−0.07950	0.9368	0.83531	8.34075	0.0000*	1.64195
ATR	0.00168666	0.000581	2.905	0.0048*				
3Yr CAGR	−0.0005037	0.002445	−0.2060	0.8373				
TA	0.0971941	0.20566	0.4726	0.6379				

(Source: Author's calculations) (* significance @ 5 percent level)

The table 7 presents the results of a fixed-effects panel regression with the dependent variable being the Dividend Payout ratio (DP Ratio). The constant term is not statistically significant, indicating that the intercept does not significantly differ from zero. This suggests that the model may not comprehensively explain variations in the Dividend Payout Ratio. The R-squared value (0.835312) suggests that a large portion of the variation in the dependent variable is explained by the independent variables. None of the independent variables except Assets Turnover ratio, including Return on Equity (ROE), Current Ratios (CR), Debt to Equity Ratio (DE Ratio), 3-Year Compound Annual Growth Rate (3Yr CAGR), and Total Assets (TA), demonstrate statistically significant relationships with the Dividend Payout Ratio in this analysis. This suggests that the model does not identify statistically significant predictors of the DP Ratio based on the variables included.

The model as a whole is statistically significant, indicating that at least one independent variable in the model has a statistically significant effect on the Dividend Payout Ratio. The Durbin-Watson (DW) test statistic indicates no significant autocorrelation in the residuals, suggesting that the model's error terms are not correlated over time. In summary, the fixed-

effects panel regression analysis does not reveal statistically significant relationships between the Dividend Payout Ratio and the selected independent variables (ROE, CR, DE Ratio, 3Yr CAGR, and TA). This suggests that, based on the variables considered in the model, these factors do not have significant predictive power in explaining variations in the DP Ratio within the dataset. However, the model as a whole is statistically significant, indicating that there might be other factors not considered in the model that influence the Dividend Payout Ratio.

4.4: Five Financial Years (2018 – 2023)

Table 8: Descriptive Statistics of the selected variables for the period of five financial years (2018 - 2023)

Statistics	*DP Ratio*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	*Size*
Mean	0.4155	18.5923	1.7530	1.7082	42.5953	17.5518	11.0592
Standard Error	0.0278	1.3692	0.0760	0.7124	3.7157	0.9633	0.0886
Median	0.3252	15.9900	1.5450	0.3950	19.2000	15.5100	11.1780
Mode	0.0000	13.2900	0.8300	0.0000	0.7400	16.1100	12.4300
Stan Deviation	0.3935	19.3630	1.0754	10.0746	52.5484	13.6224	1.2526
Sample Variance	0.1548	374.9264	1.1566	101.4969	2761.3349	185.5711	1.5691
Kurtosis	12.4860	7.3792	10.4668	96.1913	0.8887	4.1255	-0.5993
Skewness	0.3620	1.6133	2.5205	9.8190	1.2460	1.3011	0.1208
Range	4.6476	151.0200	8.1100	103.8700	217.7800	87.8400	5.6100
Minimum	-2.0435	-47.9000	0.3500	0.0000	0.0100	-10.1900	8.7400
Maximum	2.6042	103.1200	8.4600	103.8700	217.7900	77.6500	14.3500
Sum	83.11	3718.45	350.60	341.63	8519.05	3510.36	2211.83
Count	200	200	200	200	200	200	200

(Source: Author's calculations)

With an average Dividend Payout Ratio (DP Ratio) of approximately 41.55%, these entities display a commitment to distributing a significant portion of their earnings as dividends, potentially appealing to income-oriented investors. The mean Return on Equity (ROE) of approximately 18.59% indicates efficient profitability relative to shareholders' equity, while the mean Current Ratio (CR) of approximately 1.75 reflects a generally healthy liquidity position. A moderate Debt-to-Equity Ratio (DER) around 1.71 signifies a balanced capital structure. Additionally, the high mean Asset Turnover Ratio (ATR) of approximately 42.60 indicates efficient asset utilization. The moderate mean 3-Year Compound Annual Growth Rate (3Yr CAGR) of around 17.55% suggests stable growth, and the average Size value of approximately 11.06 reflects diversity in entity sizes.

The analysis of variability in the dataset reveals significant differences among the financial metrics. While some variables exhibit relatively low variability, such as the Current Ratio (CR) with a standard deviation of approximately 0.0760, others display substantial variability, such as the Asset Turnover Ratio (ATR) with a high standard deviation of about 52.5484.

Notably, the Debt-to-Equity Ratio (DER) shows considerable variability with a standard deviation of approximately 10.0746, indicating diverse financing structures among the entities. Kurtosis values vary across variables. For example, CR and DER have high positive kurtosis, indicating heavy-tailed distributions, while ATR and Size have kurtosis values closer to zero, suggesting more normal-like distributions. Skewness values also vary. CR and ROE are right-skewed, indicating a skew towards higher values, while other variables exhibit less pronounced skewness.

4.4.1. Correlation Analysis

Table 9. Pearson's corelation analysis between Dividend Payout Ratio and the selected variables for the five-year period.

Variables	*DP Ratio*	*ROE*	*CR*	*DER*	*ATR*	*CAGR*	*Size*
Dividend Pay out	1.0000						
ROE	0.4293*	1.0000					
Current Ratios	0.0191	0.1445*	1.0000				
Debt to Equity (x)	-0.0442	-0.0217	0.0452	1.0000			
Asset Turnover Ratio	0.1178	0.1702*	0.0453	0.0979	1.0000		
3 Yr CAGR Sales (%)	-0.0846	0.0716	0.0096	-0.0245	-0.1280	1.0000	
Size	-0.1316	-0.3783*	-0.4254*	-0.0311	-0.2341*	-0.0156	1.0000

(Correlation Coefficients, using the observations 1:1 - 40:5; 5% critical value (two-tailed) = 0.1388 for n = 200)
(Source: Author's calculations).

The correlation analysis between Dividend Payout Ratio (DP Ratio) and the selected variables over the five-year period yields valuable insights. Notably, DP Ratio exhibits a positive correlation with Return on Equity (ROE) with a coefficient of 0.4293, signifying that as ROE increases, there tends to be a corresponding increase in DP Ratio. This suggests that companies with higher profitability are more inclined to distribute higher proportions of their earnings as dividends. Additionally, DP Ratio is positively correlated with the Asset Turnover Ratio (ATR) at 0.1178, implying that firms with greater efficiency in utilizing their assets for generating revenue may also exhibit higher dividend payout ratios. Conversely, Size exhibits a negative correlation of -0.1316 with DP Ratio, indicating that larger entities, on average, may have lower dividend payout ratios. According to the correlation coefficients, it appears that the DPR and ROE are most closely associated. This shows that the DPR can be accurately predicted by the ROE. It is crucial to keep in mind that the correlation coefficient is not particularly strong, indicating that there are probably more factors that affect the DPR as well.

4.4.2. Panel Regression

Table 10: Fixed-effects Panel Regression; Dependent variable: Dividend payout ratio Included 40 Cross-sectional units and Time-series length is 5. (n = 200)

Particulars	Coefficient	Std. Error	t-ratio	p-value	R Squared	F Stat	P Valve	DW Test

Constant	−2.76812	1.87362	−1.477	0.1416				
ROE	0.00773282	0.00265	2.919	0.0040*				
CR	−0.010885	0.064745	−0.1681	0.8667				
DE Ratio	−0.005511	0.002754	−2.001	0.0471*	0.555846	4.282805	0.00000*	1.916118
ATR	0.00070007	0.000692	1.011	0.3134				
3Yr CAGR	−0.0036678	0.002213	−1.657	0.0995				
TA	0.280578	0.168326	1.667	0.0976				

(Source: Author's calculations) (* significance @ 5 percent level)

The fixed-effects panel regression analysis with Dividend Payout Ratio (DP Ratio) as the dependent variable and 40 cross-sectional units over a five-year period provides valuable insights. The constant term has a coefficient of -2.76812, although not statistically significant at the 5% level (p-value = 0.1416), indicating that DP Ratio is affected by other variables in the model. Return on Equity (ROE) exhibits a positive and statistically significant relationship (coefficient = 0.0077, p-value = 0.0040), implying that higher ROE is associated with an increase in DP Ratio. Conversely, Debt to Equity Ratio (DE Ratio) demonstrates a negative and significant relationship (coefficient = -0.0055, p-value = 0.0471), suggesting that higher leverage is linked to lower DP Ratios. However, Current Ratio (CR), Asset Turnover Ratio (ATR), 3-Year CAGR, and Total Assets (TA) do not appear to have statistically significant impacts on DP Ratio.

The R-squared value (0.555846) suggests that a sum portion of the variation in the dependent variable is explained by the independent variables. The model as a whole is statistically significant, indicating that at least one independent variable in the model has a statistically significant effect on the Dividend Payout Ratio. The Durbin-Watson (DW) test statistic indicates no significant autocorrelation in the residuals, suggesting that the model's error terms are not correlated over time. In summary, the fixed-effects panel regression analysis does not reveal statistically significant relationships between the Dividend Payout Ratio and the selected independent variables (CR, ATR, 3Yr CAGR, and TA). Overall, this analysis highlights the importance of ROE and DE Ratio as influential factors in explaining variations in dividend payout ratios among the entities in the dataset.

5. Conclusion

Based on the extensive panel regression analyses conducted over different time periods (one year, three years, and five years) to understand the determinants of Dividend Payout Ratio (DP Ratio), several key findings emerge. First, it is evident that Return on Equity (ROE) consistently plays a significant role in influencing DP Ratio across all time periods. Companies with higher ROE tend to have higher dividend payout ratios, suggesting that profitability is a strong driver of

dividend distribution policy. This finding aligns with the intuition that firms with robust earnings are more likely to share their profits with shareholders in the form of dividends. Conversely, Debt to Equity Ratio (DE Ratio) consistently exhibits a negative relationship with DP Ratio, indicating that companies with higher debt levels relative to equity tend to have lower dividend payout ratios. This underscores the impact of financial leverage on dividend decisions, as companies with higher debt obligations may prioritize debt servicing over dividend payments.

However, other selected variables such as Current Ratio (CR), Asset Turnover Ratio (ATR), 3-Year Compound Annual Growth Rate (3Yr CAGR), and Total Assets (TA) do not consistently demonstrate significant relationships with DP Ratio across all time periods. These results suggest that while factors like liquidity (CR), asset utilization (ATR), and growth rates (3Yr CAGR) may play roles in dividend policy decisions in specific contexts or industries, their influence is less robust and may vary over time. Additionally, the positive correlation between DP Ratio and Size observed in the five-year analysis highlights that larger entities may tend to have lower dividend payout ratios, potentially due to different financial objectives or investment opportunities.

In conclusion, the analyses reveal that while ROE and DE Ratio consistently emerge as significant determinants of DP Ratio, other factors like CR, ATR, 3Yr CAGR, and TA have less consistent or weaker associations. Therefore, when evaluating and predicting dividend payout policies, it is crucial for financial analysts and decision-makers to pay particular attention to a company's profitability and capital structure, as these factors appear to be primary drivers of dividend decisions across different time frames. However, it is essential to consider the unique characteristics of each company and industry when assessing the role of additional variables in shaping dividend policies.

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