

## CORPORATE GOVERNANCE POLICY: IMPACTS ON DIVIDEND PAYOUT

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**Title: Impact of Corporate Governance Factors on Dividend Payout**

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### **Abstract**

The study outlines the data collection and methodology, primarily utilizing financial data from the Compustat database and CEO characteristic data provided by Professor Zhu. Initial challenges in data preparation, such as the absence of the fiscal year variable and data cleaning, are addressed to ensure the accuracy and reliability of the dataset.

Empirical results are presented, including descriptive statistics of the dataset and initial Ordinary Least Squares (OLS) regression results. Challenges with model specification and distribution of the dividend payout ratio (DPR) are discussed, leading to the adoption of a robust linear model (RLM) to address outliers and violations of regression assumptions. The RLM regression output highlights significant variables, however our model specifications continually output results indicating weak correlations between dividend payout ratio and our independent variables. Given this result, we can conclude that the significant variables from the RLM are only small pieces of a much larger relationship that exists between the dividend payout ratio and market forces.

Further analysis includes logistic regression with a dummy variable in place for DPR and correlation analysis of the initial dataset and the dataset involving a dummy variable for DPR, providing insights into the relationship between our variables of interest. The study concludes with implications of the results and references to the contributing literature.

**Keywords:** Corporate governance, Dividend policy, Firm performance, Data methodology, Empirical analysis, Regression models.

### **Literature review**

The literature review conducted by our group focused on investigating the impact of corporate governance on dividend policy in firms, drawing insights from three key research articles. The first article explored the intricate relationship between corporate governance and firm performance, emphasizing the influence of governance mechanisms such as the GIM and BCF indices, stock ownership of board members, CEO-Chair separation, and board independence. This study provided a foundation for understanding the multifaceted nature of corporate governance and its implications for firm outcomes.

The second article delved into the specific relationship between corporate governance quality and dividend policy in Canadian firms. It investigated whether better-governed firms tend to have higher dividend payouts and which aspects of corporate governance are most closely associated with dividend policy. The study also examined the outcome hypothesis, which suggests that good governance leads to higher dividends, and the substitution hypothesis, which posits that strong governance may reduce the need for high dividends to control agency costs.

Lastly, the third paper aimed to deepen our understanding of how corporate governance influences dividend policy in Canadian firms. By considering competing hypotheses and examining the nuances of this relationship, the study provided a comprehensive analysis of the factors shaping dividend policy decisions in the context of corporate governance.

The authors contribute to the literature by conducting a comprehensive analysis that considers endogeneity and the relations among corporate governance, performance, capital structure, and ownership structure.

Overall, the review highlighted the importance of corporate governance in shaping dividend policy decisions and laid the groundwork for our interest in investigating this relationship further. Our hypothesis is driven by the insights gleaned from these studies, aiming

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to contribute to the broader understanding of the interplay between governance mechanisms and dividend policy outcomes.

It contributes by showing that a better governance (measured by the GIM and BCF indices, stock ownership of board members, and CEO-Chair separation) is significantly positively correlated with better contemporaneous and subsequent operating performance. Contrary to claims in the index GIM and BCF, none of the governance measures are correlated with future stock market performance

After conducting the literature review, our group concluded that it would be worthwhile to analyze how corporate governance factors influence the dividend payout policy within firms. The investigation is motivated by existing literature, which hints at a significant yet nuanced correlation between these two facets of corporate finance.

### **Hypothesis Development**

The relationship between CEO compensation and dividend payouts is a central focus in corporate finance, predicated on the idea that compensation structures exert a significant influence on executive decisions. Agency theory suggests that the alignment of CEO compensation with shareholder interests is crucial for determining dividend policy, arguing that equity-based compensation aligns CEOs' incentives with the goal of maximizing shareholder value, potentially leading to increased dividend payouts. Accordingly, we hypothesize that CEOs with a greater proportion of equity-based compensation are more inclined to favor higher dividend payouts. In parallel, CEO ownership is theorized to be directly linked to dividend payouts, under the premise that CEOs with substantial ownership stakes are naturally inclined toward maximizing shareholder wealth, as their personal financial well-being is intertwined with the company's prosperity. Given that dividends are a primary method of distributing wealth to shareholders, it is reasonable to assume that CEOs with significant ownership stakes would champion and enact more liberal dividend policies, leading to our second hypothesis that greater CEO ownership correlates with increased dividend payouts. Furthermore, the nuances of corporate governance, as manifested through the board of directors, significantly mold a company's dividend policy. The board's composition and the size, together with its governance

practices, play a pivotal role in shaping CEO compensation and, by extension, its conduciveness to dividend distribution. We posit that a firm with strong governance will institute compensation policies that promote actions in line with shareholder interests, including dividend issuance. Hence, our third hypothesis contends that effective corporate governance, as evidenced by board structure and CEO ownership, is positively associated with the propensity for dividend payouts.

In sum, our hypotheses propose that CEO compensation structure, particularly equity pay and ownership stakes, along with the influence of corporate governance, are significant determinants of a firm's dividend payout policy.

## **Data and Methodology**

### **Data Sources**

Our research study primarily utilizes two sources of data: financial data and CEO characteristic data. The financial data was extracted from the Compustat database within the Wharton Research Data Services (WRDS) platform. This database is renowned for its comprehensive coverage of financial information for companies across various sectors, and is especially useful due to their database of financial ratios for all publicly traded companies. The CEO characteristic data, on the other hand, was generously provided by Professor Zhu. This dataset includes detailed information about CEO pay, tenure, and other professional attributes that are crucial for analyzing the impact of executive leadership on dividend payouts.

### **Data Collection and Preparation**

The initial step in our data collection process involved gathering approximately one million observations from the WRDS database. A significant challenge encountered during this phase was the absence of the fiscal year (fyear) variable in our collected data. The fyear variable is essential for merging the financial data with the CEO characteristic data provided by Professor Zhu, as it ensures that the financial performance metrics align with the corresponding CEO's tenure and characteristics for the same fiscal year.

To address this issue, we adopted a methodical approach by selecting the year-end observation for each year in our dataset as our annual observation. This strategy allowed us to

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effectively construct a fiscal year variable, enabling the synchronization of financial data with the CEO characteristics based on the fiscal year. Following the creation of the fiscal year variable, the next crucial step involved cleaning the dataset to enhance its quality and reliability. This process entailed the removal of any observations with missing values (NA), a common practice to ensure the accuracy and integrity of the analyses. The cleaning process significantly reduced our dataset to approximately 60,000 observations, a more manageable and focused dataset that retains the most relevant and complete information.

### Data Matching and Merging

With a cleaned dataset in hand, we proceeded to match and merge our financial data with the CEO characteristic data provided by Professor Zhu. The matching criteria were based on two key variables: Global Company Key (gvkey) and fiscal year. The Global Company Key is a unique identifier for companies within the Compustat database, while the fiscal year variable ensures temporal consistency in our analysis.

This meticulous matching process resulted in an inner merge of the two datasets, a technique that retains only those observations present in both datasets. Consequently, our final dataset comprised just under 10,000 observations. This refined dataset, characterized by its accuracy and relevance, forms the foundation of our empirical analysis, enabling us to explore the intricate relationships between CEO-pay characteristics, dividend payout ratios, company financial performance, and other variables of interest in our study.

## Empirical Results

Figure 1: Descriptive Statistics of Dataset

	Unnamed: 0	gvkey	fyear	bm	pcf	dpr	roe	fcf_ocf	ceo_equity_pay	ceo_pay_delta	ceo_pay_vega	ceo_pay_slice	ceo_salary	ceo_total_compensation	ceo_tenure	boardsize	ceo_ownership
count	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00	9978.00
mean	4988.50	40262.10	2008.02	0.58	12.80	0.48	0.15	0.27	0.12	993.18	181.51	0.40	824.61	6001.45	7.10	12.61	13.91
std	2880.54	52907.66	3.24	0.39	23.02	5.76	0.31	5.53	0.24	8935.79	345.45	0.11	427.01	6870.87	6.75	13.19	39.15
min	0.00	1004.00	2002.00	0.00	-305.50	-9.77	-3.50	-309.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00
25%	2494.25	6737.00	2005.00	0.31	6.54	0.00	0.07	0.38	0.00	102.82	21.02	0.34	575.00	2069.19	2.38	8.00	1.03
50%	4988.50	13714.00	2008.00	0.50	10.46	0.12	0.12	0.69	0.00	262.36	72.96	0.40	775.24	4038.88	5.05	10.00	2.98
75%	7482.75	61574.00	2011.00	0.76	15.94	0.37	0.19	0.84	0.00	639.81	200.47	0.46	1000.00	7482.50	9.51	13.00	8.91
max	9977.00	264708.00	2013.00	7.10	295.20	404.62	16.60	2.98	1.00	391755.56	9442.93	0.98	8100.00	134457.92	46.03	534.00	761.15

Our investigation into the relationship between CEO compensation and dividend payout ratios (DPR) commences with an examination of the descriptive statistics of our dataset, which comprises 9,978 observations spanning fiscal years 2002 to 2013. Among the variables of interest, 'gykey' and 'fyear' are identifiers for company and fiscal year, respectively. The 'bm' variable represents the book-to-market ratio, while 'pcf' denotes the price to cash flow ratio. Our primary variable of interest, DPR, measures the dividend payout ratio. 'Roe' reflects the return on equity, and 'fcf\_ocf' is the ratio of free cash flow to operating cash flow. Compensation-related variables include 'ceo\_equity\_pay' (equity compensation), 'ceo\_pay\_delta' (change in CEO pay over time), 'ceo\_pay\_vega' (volatility of CEO pay change), 'ceo\_payslice' (percentage of total pay awarded to the CEO), 'ceo\_salary' (CEO's salary amount), 'ceo\_total\_compensation' (all forms of CEO compensation), 'ceo\_tenure' (duration of CEO's current role), 'boardsize' (number of board members), and 'ceo\_ownership' (CEO's company share ownership). We use this data to perform a regression analysis using an ordinary least squares regression, with the output shown in the following figure.

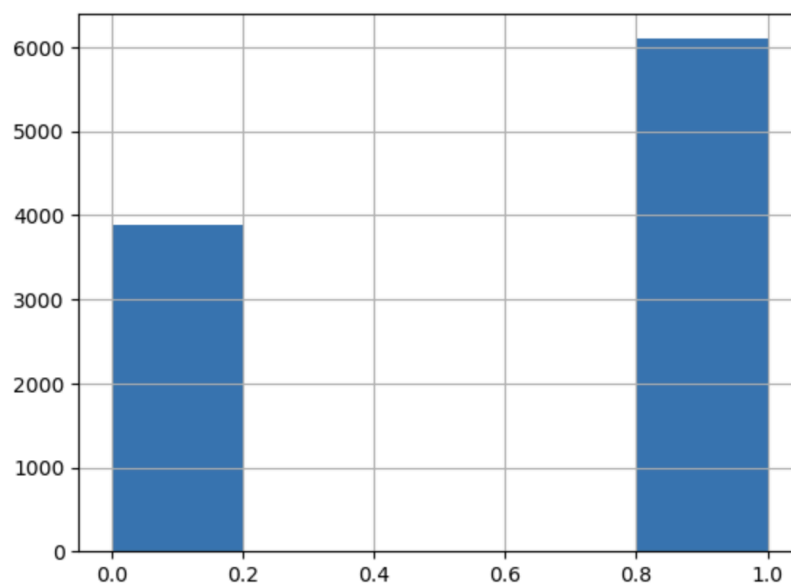
Figure 2: Initial OLS Regression Results

Dep. Variable:	dpr	R-squared:	0.001			
Model:	OLS	Adj. R-squared:	-0.000			
Method:	Least Squares	F-statistic:	0.6665			
Date:	Sat, 17 Feb 2024	Prob (F-statistic):	0.740			
Time:	14:11:49	Log-Likelihood:	-31620.			
No. Observations:	9978	AIC:	6.326e+04			
Df Residuals:	9968	BIC:	6.333e+04			
Df Model:	9					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[0.025	0.975]
Intercept	0.4425	0.264	1.679	0.093	-0.074	0.959
ceo_equity_pay	0.0711	0.248	0.287	0.774	-0.414	0.556
ceo_pay_delta	3.278e-06	7.76e-06	0.422	0.673	-1.19e-05	1.85e-05
ceo_pay_vega	1.76e-05	0.000	0.078	0.938	-0.000	0.000
ceo_payslice	0.1541	0.603	0.255	0.798	-1.028	1.336
ceo_salary	0.0002	0.000	1.367	0.172	-9.55e-05	0.001
ceo_total_compensation	-2.056e-05	1.21e-05	-1.699	0.089	-4.43e-05	3.16e-06
ceo_tenure	-0.0084	0.009	-0.897	0.370	-0.027	0.010
boardsize	-0.0020	0.005	-0.443	0.658	-0.011	0.007
ceo_ownership	-0.0012	0.002	-0.704	0.482	-0.004	0.002
Omnibus:	32177.899	Durbin-Watson:	1.991			
Prob(Omnibus):	0.000	Jarque-Bera (JB):	4557742581.231			
Skew:	53.426	Prob(JB):	0.00			
Kurtosis:	3312.272	Cond. No.	1.16e+05			

An initial Ordinary Least Squares (OLS) regression, relating DPR to CEO-specific variables and board size, revealed an R-squared value of merely 0.001, indicating a model of poor explanatory power. Despite its statistical insufficiency, the analysis highlighted ‘ceo\_total\_compensation’ as a variable with statistical significance, providing an avenue for further exploration.

Given the potential for non-normal distribution of DPR—stemming from the propensity of firms to either not pay dividends or to issue substantial dividends—we plotted the DPR values. The histogram in Figure 3 indicated a bimodal distribution, underscoring the inadequacy of a standard OLS regression for our analysis.

Figure 3: Histogram of DPR Variable



As we can see, this histogram shows the values for DPR are heavily spread out between either less than or equal to 20 percent, or greater than 80 percent. This is a non-normal distribution, and thus a typical OLS regression will not be sufficient to create a statistically significant model. To remedy this, we took multiple different approaches to reaching a new regression model. We proceeded with a robust linear model (RLM), which is less influenced by outliers and violations of homoscedasticity, incorporating variables from Dr. Zhu’s dataset and additional factors like ‘ceo\_tenure’, ‘boardsize’, and ‘ceo\_ownership’. The RLM analysis yielded statistically significant results for ‘ceo\_equity\_pay’, ‘ceo\_pay\_vega’, ‘ceo\_payslice’,

‘ceo\_total\_compensation’, and ‘ceo\_ownership’. The regression output is shown below, in Figure 4.

Figure 4: Updated RLM Regression Output

Robust linear Model Regression Results						
=====						
Dep. Variable:	dpr	No. Observations:	9978			
Model:	RLM	Df Residuals:	9968			
Method:	IRLS	Df Model:	9			
Norm:	HuberT					
Scale Est.:	mad					
Cov Type:	H1					
Date:	Thu, 08 Feb 2024					
Time:	16:02:56					
No. Iterations:	23					
=====						
	coef	std err	z	P> z	[0.025	0.975]
-----						
const	0.0981	0.011	9.180	0.000	0.077	0.119
ceo_equity_pay	-0.0704	0.010	-7.019	0.000	-0.090	-0.051
ceo_pay_delta	8.147e-08	3.14e-07	0.259	0.796	-5.35e-07	6.98e-07
ceo_pay_vega	4.006e-05	9.1e-06	4.403	0.000	2.22e-05	5.79e-05
ceo_payslice	0.0777	0.024	3.178	0.001	0.030	0.126
ceo_salary	0.0001	6.52e-06	20.955	0.000	0.000	0.000
ceo_total_compensation	-3.992e-06	4.9e-07	-8.141	0.000	-4.95e-06	-3.03e-06
ceo_tenure	-0.0033	0.000	-8.797	0.000	-0.004	-0.003
boardsize	0.0002	0.000	0.869	0.385	-0.000	0.001
ceo_ownership	-0.0002	6.8e-05	-3.376	0.001	-0.000	-9.63e-05

A robust linear model (RLM) is used when the data contain outliers or when the assumption of homoscedasticity (equal variance of errors) is violated. These conditions can greatly influence the estimates of a standard OLS regression, making them unreliable. The RLM is designed to be less sensitive to outliers by assigning them less weight, and it uses alternative estimating techniques to provide more reliable coefficient estimates under such conditions.

From this model, the significant variables (ceo\_equity\_pay, ceo\_pay\_vega, ceo\_payslice, ceo\_total\_compensation, and ceo\_ownership) suggest that certain aspects of CEO compensation are correlated with dividend payout ratios. Specifically, equity pay and total compensation seem to have a negative relationship, while pay vega and pay slice have a positive relationship. CEO ownership is also negatively related to dividend payouts.

The substantial discrepancy between the results of our Ordinary Least Squares (OLS) and Robust Linear Model (RLM) regressions prompted us to adopt an alternative approach to investigate the link between dividend payouts and CEO compensation characteristics. Consequently, we transitioned to a logistic regression analysis, which necessitated the reconceptualization of our dependent variable, DPR. Recognizing the prevalence



of firms not issuing dividends, we redefined DPR into a binary variable, assigning a value of 0 to companies that do not distribute dividends and a value of 1 to those that do. This binary categorization allowed us to circumvent the outlier-related issues inherent to the RLM and facilitated the application of logistic regression to discern the probabilistic relationship between CEO compensation factors and the likelihood of a firm paying dividends, the results of which are illustrated in Figure 5.

Figure 5: Logistic Regression with Dummy Variable for DPR

Logit Regression Results						
Dep. Variable:	dpr	No. Observations:	9978			
Model:	Logit	Df Residuals:	9957			
Method:	MLE	Df Model:	20			
Date:	Mon, 19 Feb 2024	Pseudo R-squ.:	0.04705			
Time:	13:40:57	Log-Likelihood:	-6354.4			
converged:	True	LL-Null:	-6668.1			
Covariance Type:	nonrobust	LLR p-value:	4.816e-120			
	coef	std err	z	P> z	[0.025	0.975]
Intercept	0.5252	0.137	3.830	0.000	0.256	0.794
C(fyear) [T.2003]	0.0043	0.133	0.032	0.974	-0.257	0.266
C(fyear) [T.2004]	-0.0624	0.127	-0.490	0.624	-0.312	0.187
C(fyear) [T.2005]	0.0906	0.125	0.727	0.467	-0.154	0.335
C(fyear) [T.2006]	-0.5972	0.139	-4.302	0.000	-0.869	-0.325
C(fyear) [T.2007]	-0.7358	0.140	-5.237	0.000	-1.011	-0.460
C(fyear) [T.2008]	-0.8236	0.142	-5.807	0.000	-1.102	-0.546
C(fyear) [T.2009]	-0.7837	0.141	-5.569	0.000	-1.059	-0.508
C(fyear) [T.2010]	-0.8859	0.141	-6.278	0.000	-1.162	-0.609
C(fyear) [T.2011]	-0.8233	0.142	-5.811	0.000	-1.101	-0.546
C(fyear) [T.2012]	-0.6520	0.142	-4.584	0.000	-0.931	-0.373
C(fyear) [T.2013]	-0.4506	0.145	-3.108	0.002	-0.735	-0.166
boardsize	0.0013	0.002	0.741	0.459	-0.002	0.005
ceo_ownership	-0.0019	0.001	-3.077	0.002	-0.003	-0.001
bm	0.6760	0.067	10.150	0.000	0.546	0.807
roe	0.3697	0.101	3.647	0.000	0.171	0.568
ceo_total_compensation	4.97e-05	5.25e-06	9.472	0.000	3.94e-05	6e-05
ceo_tenure	-0.0201	0.003	-5.886	0.000	-0.027	-0.013
ceo_equity_pay	-1.7352	0.151	-11.504	0.000	-2.031	-1.440
ceo_pay_delta	-1.72e-05	3.41e-06	-5.045	0.000	-2.39e-05	-1.05e-05
ceo_pay_vega	0.0008	0.000	6.696	0.000	0.001	0.001

A logistic regression is used when the dependent variable is categorical. In this case, the dependent variable DPR has become a binary outcome (either a firm does or does not pay dividends). Logistic regression models the probability that a firm does or does not pay dividends based on their CEO's characteristics. It is appropriate when you need to model the odds of an event occurring as a function of other variables, and it doesn't assume a linear relationship between the dependent and independent variables. Moreover, it doesn't require the residuals to be normally distributed.

The Pseudo R-squared is 0.04705, which is low, indicating that the model doesn't explain a large portion of the variance in the outcome. However, the model indicates significant associations between several predictors and the probability of dividends being paid out. The

negative coefficients for `ceo_total_compensation`, `ceo_tenure`, and `ceo_equity_pay` suggest these factors decrease the likelihood of dividends being paid out. Conversely, book to market and return on equity are associated with an increase in the likelihood. These results can inform stakeholders about the impact of company financial ratios and CEO compensation structures on whether a firm is likely to pay out dividends or not.

Continuing our inquiry, we adjusted the DPR dummy variable to reflect firms that pay dividends above or below a threshold of 20%. While unable to generate a logistic regression model with this specification, another RLM provided insight into how CEO compensation influences the probability of a firm's DPR exceeding 20%. Using this new specification, the RLM generated has its output listed below in Figure 6.

Figure 6: RLM Regression Model with Dummy DPR Variable

Robust linear Model Regression Results						
Dep. Variable:	dpr	No. Observations:	9978			
Model:	RLM	Df Residuals:	9968			
Method:	IRLS	Df Model:	9			
Norm:	HuberT					
Scale Est.:	mad					
Cov Type:	H1					
Date:	Mon, 19 Feb 2024					
Time:	14:45:20					
No. Iterations:	19					
	coef	std err	z	P> z	[0.025	0.975]
const	0.3198	0.021	14.895	0.000	0.278	0.362
ceo_equity_pay	-0.1163	0.020	-5.766	0.000	-0.156	-0.077
ceo_pay_delta	-5.069e-07	6.32e-07	-0.802	0.423	-1.75e-06	7.32e-07
ceo_pay_vega	9.277e-05	1.83e-05	5.073	0.000	5.69e-05	0.000
ceo_payslice	0.3094	0.049	6.297	0.000	0.213	0.406
ceo_salary	0.0003	1.31e-05	20.923	0.000	0.000	0.000
ceo_total_compensation	-2.602e-06	9.86e-07	-2.640	0.008	-4.53e-06	-6.7e-07
ceo_tenure	-0.0054	0.001	-7.077	0.000	-0.007	-0.004
boardsize	-7.023e-05	0.000	-0.191	0.848	-0.001	0.001
ceo_ownership	-0.0003	0.000	-2.243	0.025	-0.001	-3.87e-05

In analyzing the relationship between CEO compensation and the probability of dividend payout ratio (DPR) being larger than 20%, our robust linear model provides a nuanced view. The model reveals a significant negative relationship between CEO equity pay and the likelihood of DPR being higher than 20%, as indicated by a coefficient of -0.1163. This implies that increases in equity-based compensation are associated with decreases in the probability of the firm having a higher DPR. Conversely, CEO pay vega has a positive and highly significant effect on DPR,

suggesting that compensation structures with greater exposure to volatility in share price may incentivize CEOs to pursue policies that are more likely to result in a higher DPR. Similarly, CEO pay slice, with a coefficient of 0.3094, is another form of compensation positively influencing the likelihood of a higher DPR, indicating that when CEOs receive a larger slice of the pay pie, it might correlate with decisions to increase DPR.

CEO salary and the probability of DPR being 1 also show a positive correlation, although the effect size is small (0.0003), it is statistically significant, indicating a consistent albeit modest relationship. In contrast, CEO total compensation has a negative effect on DPR, with a coefficient of  $-2.602e-06$ , suggesting that when total compensation increases, the probability of a higher DPR decreases. The model does not provide evidence of a significant relationship between CEO tenure or board size and DPR, as indicated by their non-significant p-values. This suggests that these variables do not have a detectable impact on DPR in the presence of other factors. Lastly, CEO ownership displays a negative and marginally significant relationship with DPR, evidenced by a coefficient of -0.0003. This could imply that CEOs with higher ownership stakes might have preferences for reinvesting earnings back into the company rather than distributing them as dividends.

It's important to underscore that while the robust linear model used here is less sensitive to outliers and does not require the residuals to be normally distributed, logistic regression is typically the preferred method for binary dependent variables. This is because logistic regression directly models the probability of the outcome of interest, translating the log odds provided by the coefficients into probabilities. The choice to use a robust linear model is perhaps due to limitations in our dataset, or heavy outliers causing issues within our DPR dataset. We conclude our analysis by performing a Pearson correlation test between DPR and our variables of interest.

Figure 7: Pearson Correlation with a Non-Dummy Variable for DPR

	dpr	ceo_equity_pay	ceo_pay_delta	ceo_pay_vega	ceo_payslice	ceo_salary	ceo_total_compensation	ceo_tenure	boardsize	ceo_ownership
dpr	1.000000	0.000550	-0.005133	-0.005916	-0.001726	0.004969	-0.013313	-0.012049	-0.005027	-0.010912
ceo_equity_pay	0.000550	1.000000	0.005019	0.139576	0.142433	-0.068903	0.101835	-0.040647	0.008461	-0.032250
ceo_pay_delta	-0.005133	0.005019	1.000000	0.455979	-0.019807	0.059307	0.309958	0.164134	0.063829	0.263137
ceo_pay_vega	-0.005916	0.139576	0.455979	1.000000	0.100246	0.334062	0.567071	0.072142	0.196353	-0.010499
ceo_payslice	-0.001726	0.142433	-0.019807	0.100246	1.000000	0.193764	0.374593	-0.013181	0.004081	-0.115075
ceo_salary	0.004969	-0.068903	0.059307	0.334062	0.193764	1.000000	0.501136	0.019842	0.147569	-0.103402
ceo_total_compensation	-0.013313	0.101835	0.309958	0.567071	0.374593	0.501136	1.000000	0.015245	0.183492	-0.062033
ceo_tenure	-0.012049	-0.040647	0.164134	0.072142	-0.013181	0.019842	0.015245	1.000000	-0.060609	0.395093
boardsize	-0.005027	0.008461	0.063829	0.196353	0.004081	0.147569	0.183492	-0.060609	1.000000	-0.059554
ceo_ownership	-0.010912	-0.032250	0.263137	-0.010499	-0.115075	-0.103402	-0.062033	0.395093	-0.059554	1.000000

Figure 8: Pearson Correlation with a Dummy Variable for DPR

	dpr	ceo_equity_pay	ceo_pay_delta	ceo_pay_vega	ceo_payslice	ceo_salary	ceo_total_compensation	ceo_tenure	boardsize	ceo_ownership
dpr	1.000000	-0.054975	-0.000795	0.108359	0.103136	0.242595	0.132214	-0.078003	0.044069	-0.086658
ceo_equity_pay	-0.054975	1.000000	0.005019	0.139576	0.142433	-0.068903	0.101835	-0.040647	0.008461	-0.032250
ceo_pay_delta	-0.000795	0.005019	1.000000	0.455979	-0.019807	0.059307	0.309958	0.164134	0.063829	0.263137
ceo_pay_vega	0.108359	0.139576	0.455979	1.000000	0.100246	0.334062	0.567071	0.072142	0.196353	-0.010499
ceo_payslice	0.103136	0.142433	-0.019807	0.100246	1.000000	0.193764	0.374593	-0.013181	0.004081	-0.115075
ceo_salary	0.242595	-0.068903	0.059307	0.334062	0.193764	1.000000	0.501136	0.019842	0.147569	-0.103402
ceo_total_compensation	0.132214	0.101835	0.309958	0.567071	0.374593	0.501136	1.000000	0.015245	0.183492	-0.062033
ceo_tenure	-0.078003	-0.040647	0.164134	0.072142	-0.013181	0.019842	0.015245	1.000000	-0.060609	0.395093
boardsize	0.044069	0.008461	0.063829	0.196353	0.004081	0.147569	0.183492	-0.060609	1.000000	-0.059554
ceo_ownership	-0.086658	-0.032250	0.263137	-0.010499	-0.115075	-0.103402	-0.062033	0.395093	-0.059554	1.000000

Our final analytical step involved Pearson correlation tests, appearing in Figures 7 and 8 above, which yielded minimal associations between DPR and the considered variables. The only two variables which demonstrate larger than a 10% correlation are CEO salary and CEO compensation, but only when the DPR variable is a dummy variable. This lack of strong correlation suggests that our initial hypothesis might not capture the primary influences on DPR trends, implying that other market or firm-specific factors could play a more substantial role in shaping dividend payout policies.

### **Conclusion**

In conclusion, our empirical investigation has provided a multifaceted view of the dynamics between CEO compensation and dividend payout ratio (DPR). The initial Ordinary Least Squares (OLS) regression highlighted the limitations of conventional model specifications in addressing the distributional challenges of DPR. Subsequently, the adoption of a robust linear model (RLM) helped to mitigate the influence of outliers and the violation of regression assumptions, revealing that variables such as CEO equity pay, pay vega, payslice, total compensation, and ownership, while statistically significant, represent only a fragment of the complex interplay between CEO compensation and dividend payouts.

The exploration continued with logistic regression utilizing a dummy variable for DPR and a thorough correlation analysis, which together, enriched our understanding of the nuanced relationship between CEO compensation structures and the likelihood of a firm engaging in dividend distribution. Despite revealing certain patterns and associations, the overall weak correlations suggest that the determinants of dividend payout practices extend beyond the scope of our selected independent variables, pointing to broader market forces or other unexamined factors that warrant further research.

This study contributes to the existing literature by offering insights into the subtleties of corporate governance and its impact on firm financial decisions, particularly dividend policies. The findings underscore the need for an integrated approach that encompasses various aspects of corporate governance and market conditions to fully understand the mechanisms governing dividend payout decisions

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