

Corporate Governance's Policy on the Impact of Cash Holding in Indonesia

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Abstract The Asian Financial Crisis in 1997 and various other scandals in large companies in Indonesia led to the emergence of good corporate governance (GCG). Regulators on the capital markets understand that good corporate governance promotes transparency and improves the quality of financial reporting, including cash management, responsibly. Furthermore, high cash levels lead managers to misuse the fund for personal gain, because the assets under their supervision increase thereby. This research analyzes the effect of corporate governance, such as board size, and independence on cash holding in Indonesia. Data were obtained from 373 firms in seven industries publicly tabulated on Indonesia Stock Exchanges (IDX) from 2008-2017 and 2,742 firm-year observations. The obtained data were analyzed using Common, Fixed, and Random Effects Models. The result showed that the total number of the board of directors, is positively and significantly proportional to Board Size thereby increasing the company holds cash. Meanwhile, the other corporate governance variable, known as Board Independence, is insignificant in any three models. The result also showed positive coefficients of board size on cash holding (CASH) in companies with and without CEO duality. The result further showed that the independent board had a significant and negative impact on cash holding (CASH), which is more pronounced in companies with CEO duality and used to strengthen corporate governance. The results have specific policy implications like the importance of corporate governance, in particular

the role of the Board of Directors in the effective supervision of managers and transparency of enterprises.

Keywords Corporate Governance, Board Size, Board Independent, Cash Holding

1. Introduction

The topic of corporate governance and cash holding policy is investigated in this article. In Agency Theory [1], the head of the management or decision-making authority referred to as the company manager has broader access to internal information and prospects than the owner. However, this condition causes information asymmetry. In other words, it is described as a condition that reflects the imbalance of data acquisition between the providers of information as managers and the stakeholders as users. Subsequently, assuming both parties are not concerned with their personal interests, then it is ensured that the actions taken by the manager are not always based on the well-being of the owner. Therefore, the manager is limited by monitoring the designed costs and activities. Meanwhile, previous empirical studies further reported the important act of corporate governance in cash holding policy. [2], [3], [4], [5] and [6] reported the presence of an agency motive associated with cash holding. This implies that cash has no value in a country with enormous agency

problems between insiders and outsiders or shareholders of the company. Besides, agency motive is driven by differences in interests and due to a significant amount of cash in the company's possession, transparency is needed to reduce conflicts. Thus, it is critical for practitioners and researchers to explore corporate governance's impact on cash holdings in a variety of contexts.

Numerous prior studies on the connection between corporate governance and cash holdings have focused exclusively on developed countries [3], [4], [7], [8], [9], [10]. At the same time, there have been very few studies that have looked at the relationship between corporate governance and the cash balance of the corporation, particularly in emerging countries particularly in Asia [11]. The results are mixed, where with empirical studies presenting both positive and negative evidence in highlight of the relationship board size - cash holding nexus and board independent - cash holding nexus. For instance, [12] found negative impact board size on cash holding, meanwhile [5] and [13] show positive impact. [14] confirms positive relationship between board independent and cash holding, meanwhile [8] and [10] confirms negative. This research is driven by this problem and presents an early examination of the connection between corporate governance and cash management policies. Furthermore, this research explored the effect of board size and independence on companies with CEO duality. Our findings contribute to the cash policy literature. When it comes to corporate governance and cash policies in emerging markets, this paper fills a significant gap in the literature. The paper uses Indonesia as a case study to identify the impact of these policies. Moreover, the joint impact of CEO duality was estimated. Previous studies tend to examine separately the board size - cash holding nexus and board independent - cash holding nexus.

The focus of this research is on the Indonesian context. Good Corporate Governance (GCG) in Indonesia became popular subsequent to the Asian Financial Crisis in 1997. Furthermore, several other scandals that occurred in large companies, such as Jiwasurya, SNP Finance, PT. Hanson International Tbk, PT. Tiga. Pilar. Sejahtera Food Tbk, Indosat, PT. Garuda Indonesia. Indeed, capital market regulators have enacted certain policies, namely Law Number 8 of 1995 on Capital Markets, Financial Services Authority (FSA) Regulation No.18/POJK.03/2014 regarding the Implementation of Integrated Good Corporate Governance for Financial Conglomerate and Financial Services Authority Regulation No.21/POJK.04/2015 regarding the application of Corporate Governance Guidelines for Public Companies. Irrespective of these odds, inadequate corporate governance rule enforcement is still common. Indeed, capital market regulators in Indonesia, as the biggest stock market in Southeast Asia, understand that the application of good corporate governance encourage transparency and

responsibly improve the quality of financial reports, including cash management. Besides, high cash holding causes managers to misuse the fund for personal gains because this tends to increase the assets under their supervision. It also reflects the management's inability to properly manage the company's assets, thereby causing it to miss certain opportunities, such as obtaining returns from idle funds. Therefore, the cash-holding policy is the focus of this study.

This article will be structured in the following manner. In the first section, the theoretical framework is provided by the authors, with a particular emphasis on theories of agency being placed on it. This review focuses on the association between corporate governance and cash holdings in businesses with dual CEOs. The next section explains the data and technique used in this investigation. Finally, but certainly not least, this paper presents the data and their analysis, and concludes with a synopsis of the major findings.

2. Literature Review

One of the liquid assets used to appropriate the instantaneous requirements of a company is Cash on hand. Several studies analyzed the relationship between cash on hand and corporate governance. A research stated that firms holding cash were more accepted in countries with significant levels of agency problems reflecting poor investor protection [3]. It further reported that good corporate governance substantially impacts the company's value, thereby causing it to hold less cash [20]. A research stated that firms and discovered that firm governance structures tend to keep a large cash reserve [7]. Based on data acquired worldwide, [8] discovered the impact of corporate governance on cash holdings. Other research carried out a study on Chinese firms and discovered that there is mixed evidence regarding government quality on cash holdings [9]. In accordance with data acquired from the developing financial market, [10] reported the massive relationship among firms, cash holdings and corporate governance. Recently, [11] discovered that the stronger the internal governance structure, the more cash is limited at the manager's discretion. On the contrary, [12] carried out research based on international data and reported that there is no significant evidence that companies tend to have excess cash. Moreover, companies with weak shareholder protection possess excess cash. Managers prefer to invest money in profitable endeavors; therefore, cash negatively affects the value of the company. Cash holding is reduced in companies operating in countries with weak governance level [2]. Furthermore, there is a negligible correlation between corporate governance and cash positions on the Shanghai and Shenzhen stock exchanges [13]. [14] reported that it has an insignificant event on Indonesian manufacturing industries.

[34] considers board size and board independence to be critical elements in internal corporate governance. Studies on the link between board size and cash holding can be partitioned into two signs: negative and positive. As the negative sign, the size of the board of commissioners responsible for conducting supervisory functions is one of the good corporate governance of a company. The reason is they play an essential role in supervising and offering advice to directors and managers. [15] reported that complex operations encourage board members to supervise intricate company activities. Larger boards are better at providing effective monitoring services [16]. [17] and [18] stated that companies with smaller boards have good corporate governance with outstanding decision-making process. A large number of board members requires a long process in making decisions. Therefore, companies tend to be more dynamic and efficient, which leads to maximum supervision and management of cash holding by self-interested managers. Furthermore, [18] stated that companies with small board sizes are estimated to have lesser cash holding because small board sizes tend to be more efficient in making decisions. This boosts supervision and decision-making and reduces management actions that tend to act in their interests by selecting projects without positive NPV values. [19] reported that board size of commissioners has a negative impact on cash holdings. Conversely, companies with lesser cash holdings tend to have a large board size. Similarly, [21] researched MENA countries and discovered that a negative and significant relationship exists between the board size and cash holdings.

For the positive sign, the composition of the board of directors is believed to influence the quality of board monitoring actions. Indeed, a board's ability to monitor managerial behavior more effectively is largely dependent on the ease of communication and cooperation inside the boardroom, which is itself contingent on the number of directors. While larger boards are likely to have a larger pool of knowledge and abilities, their organizational inefficiencies appear to be far greater, implying potentially significant agency costs. [22] reported that boards with numerous numbers of members, tend to experience free riding, hence they become less active in supervisory activities. Similarly, companies with large board of commissioners have a positively and significant effect on cash position [5] [20]. Additionally, [17] discovers that inefficiencies and coordination issues are inversely connected to the size of the board of directors.

The size board of commissioners that are responsible for properly carrying out supervisory functions in the company, in order to resolve managers' and other stakeholders' conflicts of interest. However, a phenomenon where the board of commissioners is either passive or too intervening is a hindrance to implementing sound corporate governance. In this case, the size of the independent board of commissioners is important because

the other members are the controlling shareholders. [23] highlighted the importance of the role of an independent director as it protects the interests of shareholders rather than the executives. [24] emphasized the role of independent directors in reducing agency costs. Conceptually, the independent board of commissioners is the neutral and competitive party in the field of management. Their existence is expected to be a neutralizer against some of the policies enacted by the board of directors. [25] researched high-tech firms listing and discovered that independent directors tend to hold more cash. However, [26] reported a negative and significant relationship between independent directors and cash holdings in UK firms. Meanwhile, [21] further stated that there is an insignificant relationship between directors of independent and cash holding. This indicates that independent directors are ineffective in their efforts to improve monitoring and supervisory functions.

The CEO's duality and board size play an essential role in maintaining appropriate levels of money in a firm. CEO controls the information which makes it accessible to the other board members and hinders a productive supervision process [27]. However, it was further explained that the CEO Duality has dual responsibilities, namely serving the management team's interests and holding back excessive cash [28]. Moreover, the CEO tends to play broader roles as well as have more cash reserves to serve their personal interests rather than the shareholders. [20] further stated that a strong board reduces the management's tendency to hold cash. Therefore, board size positively and negatively affects companies with CEO Duality.

The following hypotheses were proposed based on the aforementioned discussion relating to the connection between corporate governance (board size and board independence) and cash holding.

H1- Board size negatively affects cash holding.

H2- Board independence negatively affects cash holding.

H3- Board size negatively affects cash holding in companies with CEO Duality

H4- Board independence negatively affects cash holding in companies with CEO Duality

3. Methods

This research analyzes the impact of corporate governance on cash holding. Furthermore, it explores the impact of corporate governance on cash management in companies with CEO duality. The population in this study includes 422 companies from 7 non-financial sectors. The research samples consisting of 373 companies were selected using the purposive sampling method. The number of samples in each sector is stated as follows Agriculture (18 companies or 4.83 percent), Mining (37 companies or 9.92 percent), Basic Industry & Chemicals

(68 companies or 18.23 percent) Miscellaneous Industry (26 companies or 6.97 percent), Consumer Goods Industry (26 companies or 6.97 percent), Property Real Estate & Building Construction (54 companies or 14.48 percent), and Trade Services & Investment (144 companies or 38.61 percent).

Preliminary studies conducted by [11], [21] and [26] were in line with the dependent variable used to carry out this research. In addition, independent variables consist of Board Size (BSIZE) and Board Independence (BIND). Meanwhile, control variables include Firms Size, Profitability, Leverage, Dividend, Inflation, and GDP. The independent, dependent, and control variables representing the constructs can be seen in Table 2.

This study adopted a regression analysis technique to examine the connection between corporate governance

and cash management. Equation 1 is a regression equation

$$CASH_{i,t} = \alpha_{i,t} + \beta_1 BSIZE_{i,t} + \beta_2 BIND_{i,t} + \beta_3 FSIZE_{i,t} + \beta_4 LEVE_{i,t} + \beta_5 ROE_{i,t} + \beta_6 DIVI_{i,t} + \beta_7 INFL_{i,t} + \beta_8 GDP_t + \varepsilon_{i,t} \quad (1)$$

The static panel data analysis was utilized in this research. This involves 3 approaches, namely, Common (CEM), Fixed (FEM), and Random (REM) Effect Model. The 3 models were selected by adopting the Breusch and Pagan Lagrangian (BPL) multiplier test for random effects, including the Hausman analysis [30]. Additionally, the BPL multiplier test is used to compare the PLS and FEM models. However, supposing the p-value is significant, FEM with the Hausman test is used to determine the REM models. Therefore, when the p-value is significant, the best model is FEM.

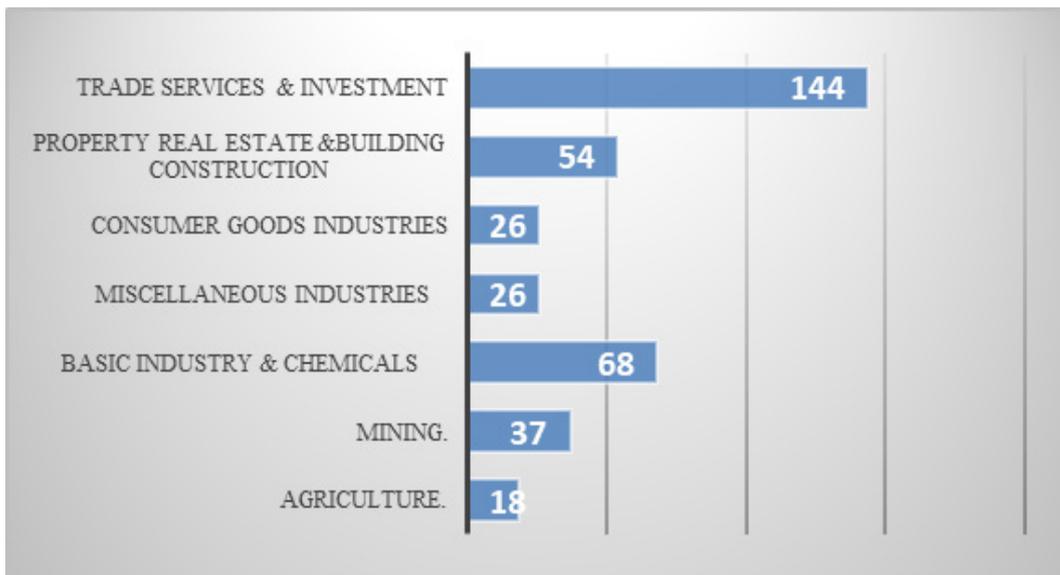


Figure 1. Industry-Specific Firm Sample

Table 2. Definition of Variables

Variables	Symbol	Definition and measure	Expected Sign
Dependent			
Cash Holding	CASH	Cash plus cash equivalents divided by total assets (%)	
Independent			
Board Size	BSIZE	Total number of members of the board of directors	+/-
Board Independence	BIND	independent directors divided by the total number of directors (%)	+/-
Control			
Firms Size	FSIZE	Ln_total assets	+
Leverage	LEVE	The ratio of total debt divided by total equity (%)	+
Dividend	DIVI	Dummy variable considering the value 1 assuming the companies paid dividend and 0 supposing they did not.	-
Profitability	ROE	The ratio of net profit/total equity (%)	-
Inflation	INFL	Annual inflation rate (%)	-
GDP	GDP	Growth of GDP (%)	-

4. Result and Discussion

The overall samples of the numerous variables are shown in Table 3. The average CASH realized is 9.1136 percent, with an 8.5855 percent standard deviation. Meanwhile, the average board size is 4 commissioners. On the contrary, the maximum and minimum numbers are 8 and 2 commissioners, respectively. Furthermore, the average number of independent commissioners is 38.62 percent. In generally, average variables exceed the standard deviation, thereby, resulting in a good representation, except for the profitability.

The correlation degree between the explanatory variables and the panel regression analysis are shown in Table 4. Furthermore, it shows that the explanatory variables are not highly correlated, which means that multi-collinearity is not associated with issues. According to [31], multi-collinearity is not an issue in the data when the correlation is greater than 0.70. In addition, VIF was

used to check for multi-collinearity problem. Besides there was no VIF value > 10. This means that in this case, there is no multi-collinearity problem.

The outcomes of the association between cash holding (CASH) and the explanatory variables are shown in table 4. The specification was estimated using static panel data analysis, which includes the control variables, firm characteristics, macroeconomic, and year dummy. Based on the BPL multiplier test output results, it is evident that the F test and Chi-square values are 0.0000, respectively. This value is also presumed to be significant because it is smaller than 0.05. This signifies that the null hypothesis has been rejected in this case. Therefore, the FEM method is better than the OLS. Furthermore, the Hausman Test was also performed. Based on the test output results, it is evident that the p-value, which is equal to 0.1952, is greater than 0.05. Apparently, the null hypothesis is recognized. Therefore, the REM method is better compared to FEM.

Table 3. All variables were subjected to descriptive statistics (N = 2742)

Variables	Mean	Std. Dev	Min	Max
CASH	9.1136	8.5855	0.3743	37.132
BSIZE	4.1590	1.5790	2	8
BIND	38.621	8.8414	25	61.25
FSIZE	23.544	4.8400	14.125	30.004
LEVE	49.583	19.687	11.399	85.280
DIVI	0.3453	0.4755	0	1
ROE	11.930	16.870	-38.05	57.27
INFL	5.5127	2.6802	2.8	11.1
GDP	12.746	5.3450	7.50	25.25

Table 4. Correlation Matrix

Variables	BSIZE	BIND	SIZE	LEV	DIV	ROE	INF	GDP	VIF
BSIZE	1.0000								1.08
BIND	-0.0683	1.0000							1.01
FSIZE	-0.2052	0.0268	1.0000						1.05
LEVE	-0.0308	-0.0193	0.0479	1.0000					1.03
DIV	-0.0848	0.0071	-0.0039	0.0353	1.0000				1.01
ROE	0.1422	-0.0667	-0.0681	0.0804	-0.0428	1.0000			1.08
INFL	0.0320	-0.0197	0.0098	-0.0754	0.0216	0.0353	1.0000		3.66
GDP	0.0339	-0.0157	0.0341	-0.0847	0.0287	0.0955	0.6018	1.0000	3.97

This research examined the effect of the hypothesized variables of corporate governance. Subsequently, a positive and significant coefficient of BSIZE (Board Size) was discovered, and this implied that the higher the total number of the board of directors' results, the higher the company's cash holding, thereby contradicting H1. This empirical finding corroborates the findings of [5] and [20], which supports the argument that the board size positively affects cash holding. These results are in accordance with the research carried out by [5] and [20]. This finding implies that larger boards are associated with higher cash holding. Indeed, large board is better in providing monitoring. However, this study finds that a bigger board is not associated with effective supervision of managers and company transparency. Therefore, the characteristics of corporate governance tend to limit the actions of

managers in hoarding unimplemented excess cash. This result is also consistent with [17] which shows that large board increases inefficiency and coordination issue, thereby increasing cash holding.

Meanwhile, the other corporate governance variable, Board Independence (BIND), is insignificant in any of the 3 models, thereby contradicting H2. This result shows that the board of Independence offers ineffective monitoring activities in the country. The explanation for this outcome is that in Indonesia, the high level of political connections in the appointment of an independent board and favourable networking expertise is attributed to the reason for linking an appointment process. It is in accordance with the study carried out by [21], which stated that an insignificant relationship existed between independent directors and cash holding.

Table 4. Corporate Governance and Cash Holding; Baseline

Explanatory Variable	Dependent Variable: CASH		
	(OLS)	(RE)	(FE)
BSIZE	0.9388*** (0.1028)	0.7985*** (0.1663)	0.6358*** (0.2054)
BIND	0.00635 (0.0168)	0.0042 (0.0202)	0.0035 (0.0216)
FSIZE	0.0222 (0.3072)	-0.0078 (0.0592)	0.0107 (0.0832)
LEVE	0.1109*** (0.0081)	0.1112*** (0.0126)	0.1125*** (0.0149)
DIVI	-0.4516 (0.3168)	-0.2478 (0.3132)	-0.2397 (0.3329)
ROE	0.1202*** (0.0094)	0.0720*** (0.0107)	0.0582*** (0.0111)
INFL	0.0157 (0.1003)	-7.1461** (3.3490)	0.1183 (0.0731)
GDP	0.0672 (0.0526)	1.5843* (0.8665)	-0.0265 (0.4691)
Constant	-3.9538*** (1.4592)	8.6545** (4.3701)	-0.3560 (2.5156)
Year_Dummy	Yes	Yes	Yes
R_Squared	0.1840	0.1121	0.1131
F_Test	36.17		9.41
Prob.>F	0.0000		0.0000
Wald_chi2		183.30	
Prob.>chi2		0.0000	
Observation	2742	2742	2742
BPL multiplier test for RE	chibar_2(01) = 2195.15 Prob>chibar2 = 0.0000		
Hausman_test Observation			chi2_(10) = 13.54 Prob>chi2 = 0.1952

Note: *sig. at 10%, ** sig. at 5%, and *** sig. at 1%

Table 5. Corporate Governance and Cash Holding; without CEO-Duality vs with CEO-Duality

Explanatory Variable	Dependent Variable: CASH					
	without CEO-Duality			with CEO-Duality		
	(OLS)	(RE)	(FE)	(OLS)	(RE)	(FE)
BFSIZE	1.2405*** (0.2146)	0.8195*** (0.2765)	0.3044 (0.3573)	0.8749*** (0.1167)	0.8449*** (0.1911)	0.6737*** (0.2400)
BIND	-0.0847** (0.0302)	-0.0788** (0.0314)	-0.0792** (0.0340)	0.0506** (0.0202)	0.0336 (0.0239)	0.0277 (0.0262)
FBSIZE	0.1343** (0.0579)	0.1044 (0.0919)	0.2462 (0.1563)	-0.0167 (0.0371)	-0.0567 (0.0725)	-0.0632 (0.1052)
LEVE	0.1172*** (0.0160)	0.1411*** (0.0251)	0.1717*** (0.0346)	0.1083*** (0.0094)	0.0978*** (0.0135)	0.0943*** (0.0162)
DIVI	-1.0547* (0.5909)	-0.5936 (0.5259)	-0.5670 (0.5399)	-0.2086 (0.3732)	-0.0672 (0.3713)	-0.0734 (0.4028)
ROE	0.0774*** (0.0175)	0.0598*** (0.0171)	0.0429* (0.0192)	0.1344*** (0.0112)	0.0781*** (0.0128)	0.0596*** (0.0133)
INFL	-0.3800* (0.1938)	-2.2637 (5.9856)	-0.1566 (0.1585)	0.1520 (0.1142)	-8.8695** (4.0609)	0.01520 (0.0876)
GDP	0.1001 (0.0959)	0.2058 (1.5798)	0.0040 (0.0991)	0.0585 (0.0626)	2.1303** (1.0447)	0.1038* (0.0557)
Constant	-0.1790 (0.5467)	4.5673 (7.0228)	-1.6472 (4.8275)	-5.976*** (1.6561)	9.5877* (5.5687)	-1.0331 (3.2780)
Year_Dummy.	Yes	Yes	Yes	Yes	Yes	Yes
R_Squared	0.1669	0.1146	0.1248	0.2086	0.1280	0.1297
F_Test	11.64		4.98	28.01		7.56
Prob.>F	0.0000		0.0000	0.0000		0.0000
Wald_chi2		108.56			145.93	
Prob.>chi2		0.0000			0.0000	
Observation	814	814	814	1982	1982	1982

Note: *sig. at 10%, ** sig. at 5%, and *** sig. at 1%

This research also examines the efficiency and effectiveness of corporate governance by analysing the impact of board size (BFSIZE) and board independence (BIND) on cash management and distinguishing between companies that have and does not have CEO duality, as shown in Table 5. This is similar to the results in Table 2, which discovered the positive coefficients of board size (BFSIZE) on cash holding (CASH) in companies with or without CEO duality, thereby supporting H3. However, the results in this study are different because the independent board (BIND) has a significant and negative impact on cash holding (CASH). This result is obvious in companies with CEO duality, hence H4 is supported. Furthermore, this finding is in accordance with the research carried out by [20].

This section determined the robustness of the main results in 3 ways. Firstly, the samples were separated into

low and high cash management firms, to determine the robustness. The findings were used to determine whether the relationship between corporate governance and cash holding is in accordance with the main results, as shown in Table 6. Secondly, this study analyzes the impact of financial crisis worldwide, as shown in Table 7. Therefore, the sample period was separated into normal and global financial crisis periods. The results are consistent with the baseline regression. Finally, 2 potential sources of endogeneity, including omitted variables and self-selection bias, were reported in this research. Based on the studies carried out by [32], [33] in respect to the issue of endogeneity, an alternative estimation of the generalized method of moments (GMM) was adopted. In conclusion, consistent results were obtained for the board size, as shown in Table 8.

Table 6. Corporate Governance and Cash Holding; High Cash Holding vs Low Cash Holding

Explanatory Variable	Dependent Variable: CASH					
	High			Low		
	(OLS)	(RE)	(FE)	(OLS)	(RE)	(FE)
BSIZE	0.6520*** (0.1470)	0.5961** (0.2341)	0.5962* (0.3222)	0.3754*** (0.0704)	0.4317*** (0.0982)	0.6442** (0.2020)
BIND	0.0342 (0.0252)	0.0186 (0.0313)	0.0079 (0.357)	-0.0220 (0.0116)	-0.0202 (0.0143)	-0.0136 (0.0204)
FSIZE	0.0774 (0.0431)	0.0234 (0.0747)	-0.0149 (0.1288)	-0.0147 (0.0201)	-0.0081 (0.0303)	0.0254 (0.0923)
LEVE	0.1240*** (0.0110)	0.1417*** (0.0171)	0.1635*** (0.0240)	0.0180** (0.0061)	0.0258*** (0.0084)	0.0543*** (0.0146)
DIVI	0.3311 (0.4641)	-0.1177 (0.5266)	-0.4340 (0.5963)	-0.0996 (0.2203)	-0.0242 (0.2350)	0.0873 (0.2856)
ROE	0.0942*** (0.0148)	0.0935*** (0.0176)	0.0956*** (0.0192)	0.0314*** (0.0061)	0.0281*** (0.0069)	0.0205** (0.0089)
INFL	-0.0386 (0.1476)	-16.238*** (5.4105)	0.2296* (0.1273)	0.0151 (0.0702)	6.3483** (3.2033)	-0.0053 (0.0706)
GDP	0.0823 (0.0782)	3.4052** (1.4182)	-0.1085 (0.0831)	0.0461 (0.0377)	-1.3798* (0.8141)	0.0644 (0.0396)
Constant	-1.5028 (2.0163)	24.656*** (6.6616)	2.1167 (3.9591)	1.6065 (1.0848)	-7.5912 (4.3372)	-2.4566 (2.9005)
Year_Dummy.	Yes	Yes	No	Yes	Yes	No
R_Squared	0.1791	0.1776	0.1788	0.0677	0.0650	0.0728
F_Test	18.02		10.46	6.42		3.04
Prob.>F	0.0000		0.0000	0.0000		0.0002
Wald_chi2		161.76			69.58	
Prob.>chi2		0.0000			0.0000	
Observation	1377	1377	1377	1365	1365	1365

Note: *sig. at 10%, ** sig. at 5%, and *** sig. at 1%

Table 7. Corporate Governance and Cash Holding; Crisis Period vs Normal Period

Explanatory Variable	Dependent Variable: CASH					
	Crisis Period			Normal Period		
	(OLS)	(RE)	(FE)	(OLS)	(RE)	(FE)
BSIZE	1.0850*** (0.2701)	0.9416*** (0.2896)	0.1381 (0.5250)	0.9026*** (0.1114)	0.7863*** (0.1758)	0.6047*** (0.2303)
BIND	-0.0217 (0.0426)	-0.0523 (0.0424)	-0.0840 (0.0631)	0.0116 (0.0184)	0.0161 (0.0213)	0.0169 (0.0230)
FSIZE	0.1328* (0.0759)	0.0612 (0.0966)	-0.5121* (0.3016)	0.0079 (0.0337)	-0.0267 (0.0575)	-0.0115 (0.0811)
LEVE	0.0978*** (0.0202)	0.0909*** (0.0252)	0.0903 (0.0661)	0.1126*** (0.0089)	0.1138*** (0.0132)	0.1143*** (0.0162)
DIVI	-1.2682 (0.8211)	-0.6618 (0.7779)	-0.3825 (1.2006)	-0.3091 (0.3450)	-0.1104 (0.3476)	-0.0625 (0.3745)
ROE	0.1301*** (0.0219)	0.0937*** (0.0295)	-0.0459 (0.0675)	0.1172*** (0.0104)	0.0645*** (0.0108)	0.0485*** (0.0113)
INFL	-0.0653 (0.2648)	-6.9704 (8.6964)	0.0024 (0.3163)	0.0225 (0.1086)	-4.1254 (3.6043)	0.1765** (0.0782)
GDP	0.1748 (0.1347)	1.0385 (2.2199)	0.0437 (0.2008)	0.0443 (0.0572)	0.9262 (0.9513)	-0.0919* (0.0509)
Constant	-5.389 (0)	14.3899 (11.5473)	18.9338*** (6.8330)	-3.6416** (1.5865)	4.1286 (4.5368)	0.3702 (2.5002)
Year_Dummy.	Yes	Yes	No	Yes	Yes	No
R_Squared	0.1969	0.0246	0.0916	0.1865	0.1161	0.1175
F_Test	6.17		1.61	30.49		8.58
Prob.>F	0.0000		0.0714	0.0000		0.0000
Wald_chi2		60.46			185.65	
Prob.>chi2		0.0000			0.0000	
Observation	441	441	441	2301	2301	2301

Note: *sig. at 10%, ** sig. at 5%, and *** sig. at 1%

Table 8. Corporate Governance and Cash Holding; GMM Method

Explanatory Variable	Dependent Variable: CASH
CASH (-1)	0.1649** (0.0783)
BSIZE	4.1279*** (1.4396)
BIND	-0.3932*** (0.1460)
FSIZE	0.2876 (0.1460)
LEVE	0.3947*** (0.4566)
DIVI	2.3838 (2.6349)
ROE	0.1564** (0.0724)
INFL	-0.2109** (0.0837)
GDP	0.1778*** (0.0527)
Number_of_obs	1804
Number_of_groups	342
Number_of_instruments	36
AR(2)	0.747
Hansen test	0.274

Note: Dynamic panel-data estimation, two-step difference GMM. *sig. at 10%, ** sig. at 5%, and *** sig. at 1%

5. Conclusions

In conclusion, this research examined the effect of corporate governance on cash holding in companies with CEO duality. Data were obtained from 373 companies using the purposive sampling methods and analyzed using the static panel data analysis, involving 3 approaches, namely, Common (CEM), Fixed (FEM), and Random (REM) Effect Model. The study showed that the coefficient BSIZE (Board Size) is positive and significant. Therefore, the higher the total number of board of directors, the greater the company's cash holdings. Meanwhile, the other corporate governance variable, Board Independence (BIND), was insignificant in the 3 models. Furthermore, this study discovered the positive coefficients of board size (BSIZE) on cash holding (CASH) in companies with and without CEO duality. However, different studies regarding the independent board (BIND) had a significant and negative impact on cash holding (CASH). This finding is more pronounced in companies with CEO duality. The overall results showed a series of robustness, including alternative sub-samples and endogeneity-related issues. The findings also provide certain specific policy implications, such as the importance of corporate governance, particularly the board commissioner's role towards effective supervision of managers and company transparency particularly regarding the political connections in the appointment of independent commissioners. Secondly, it is considered to

strengthen corporate governance, thereby optimizing cash holding.

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REFERENCES

- [1] Jensen, M. C., Meckling, W. H. "Theory of The Firm: Managerial Behavior, Agency Costs and Ownership Structure". *Journal of Financial Economics*, Vol 3, No 4, pp. 305–360. (1976), [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- [2] Pinkowitz, L. E. E., Stulz, R. E. N. Williamson, R. "Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis." *Journal of Finance*, Vol 61, No 6, pp. 2725-2751. (2006), <https://doi.org/10.1111/j.1540-6261.2006.01003.x>
- [3] Dittmar, Amy., Jan Mahrt-Smith. "Corporate Governance and the Value of Cash Holdings". *Journal of Financial Economics*, Vol 83, No 3, pp. 599- 634. (2007), <https://doi.org/10.1016/j.jfineco.2005.12.006>
- [4] Bates, T. W., Kahlee, K. M., Stulz, R. M. "Why Do U.S Firms Hold So Much More Cash Than They Used To?" *The Journal of Finance*, Vol 64, No 5, pp. 1985–2021. (2009), <https://doi.org/10.1111/j.1540-6261.2009.01492.x>
- [5] Boubker Mouline., Hicham Sadok., "Corporate Cash Holdings and Agency Conflicts: Evidence from Moroccan Developing Market," *Universal Journal of Accounting and Finance*, Vol. 9, No. 1, pp. 24 - 32, 2021. <https://doi.org/10.13189/ujaf.2021.090103>.
- [6] Dey, S. K., Sharma, D., "Nexus between Corporate Governance and Financial Performance: Corroboration from Indian Banks," *Universal Journal of Accounting and Finance*, Vol. 8, No. 4, pp. 140 - 147, 2020. <https://doi.org/10.13189/ujaf.2020.080406>.
- [7] Harford, J., Mansi, S. A., Maxwell, W. F. "Corporate governance and Firm Cash Holdings in the US". *Journal of Financial Economics*, Vol 87, No 3, pp. 535-555. (2008) <https://doi.org/10.1016/j.jfineco.2007.04.002>
- [8] Iskandar-Datta, M., Jia, Y. "Agency conflict and corporate cash holdings around the world". *Review of Quantitative Financial Accounting*, Vol 41, pp. 1-29. (2014), <https://doi.org/10.1007/s11156-013-0371-y>
- [9] Chen, D., Li, S., Xiao, J. Z., Zou, H. "The effect of government quality on corporate cash holdings". *Journal of Corporate Finance*, Vol 27, pp. 384–400. (2014), <https://doi.org/10.1016/j.jcorpfin.2014.05.008>

- [10] Yu, H.-C., Sopranzetti, B.J. Lee, C. F. “The impact of banking relationships, managerial incentives, and board monitoring on corporate cash holdings: an emerging market perspective” *Review of Quantitative Finance and Accounting*, Vol 44, No 2, pp. 353-378. (2015), <https://doi.org/10.1007/s11156-013-0402-8>
- [11] Chen, R., Guedhami, O., Yang, Y., Zaynutdinova, G. R. “Corporate governance and cash holdings: Evidence from worldwide board reforms”. *Journal of Corporate Finance*, Vol 65, 101771. (2020), <https://doi.org/10.1016/j.jcorpfin.2020.101771>
- [12] Kalcheva, I., K Lins. “International evidence on cash holdings and expected managerial agency problems”. *Review of Financial Studies*, Vol 20, No 4, pp. 1087–1112. (2007)
- [13] Kusnadi, Y., Yang, Z., Zhou, Y. “Institutional development, state ownership, and corporate cash holdings: Evidence from China”. *Journal of Business Research*, Vol 68, No 2, pp. 351–359. (2015), <https://doi.org/10.1016/j.jbusres.2014.06.023>
- [14] Hadjaat, M., Yudaruddin, R., Riadi, S. S. “The Impact of Financial Distress on Cash Holdings in Indonesia: Does Business Group Affiliation Matter?” *The Journal of Asian Finance, Economics and Business*, Vol 8, No 3, pp. 373–381. (2021), <https://doi.org/10.13106/JAFEB.2021.VOL8.NO3.0373>
- [15] Boone, A.L., Field, L.C., Karpoff, J.M., Raheja, C.G., “The determinants of corporate board size and composition: an empirical analysis”. *Journal of Financial Economics*, Vol 85, No 1, pp. 66-101, (2007), <https://doi.org/10.1016/j.jfineco.2006.05.004>
- [16] Berger, P. G., Ofek, E. Yermack, D. L. “Managerial Entrenchment and Capital Structure Decisions”, *Journal of Finance*, Vol 52, No 4, pp. 1411-1438. (1997), <https://doi.org/10.1111/j.1540-6261.1997.tb01115.x>
- [17] Yermack, D. “Higher market valuation companies with a small board of directors”. *Journal of Financial Economics*, Vol 40, pp. 185–212. (1996), [https://doi.org/10.1016/0304-405X\(95\)00844-5](https://doi.org/10.1016/0304-405X(95)00844-5)
- [18] Hellman T, Puri M. “The interaction between product market and financing strategy: the role of venture capital”. *The Review of Financial Studies*, Vol 13, No 4, pp. 959–984. (2000).
- [19] Kuan, Tsung-Han., Liu, Chu-Shiu., Liu, Chwen-Chi. “Corporate Governance and Cash Holdings: A Quantile Regression Approach”. *International Review of Economics and Finance*, Vol 24, pp. 303-314. (2012), <https://doi.org/10.1016/j.iref.2012.04.006>
- [20] Lee, Kin-Wai., Lee, Cheng-Few. “Cash Holdings, Corporate Governance Structure and Firm Valuation”. *Review of Pacific Basin Financial Markets and Policies*, Vol. 12, No. 03, pp. 475-508. (2009). <https://doi.org/10.1142/S021909150900171X>
- [21] Al-Najjar, B., Clark, E., “Corporate governance and cash holdings in MENA: Evidence from internal and external governance practices”. *Research in International Business and Finance*, Vol 39, pp. 1–12. (2017), <https://doi.org/10.1016/j.ribaf.2016.07.030>
- [22] Lipton, M. Lorsch, J. W. “A modest proposal for improved corporate governance”. *Business Lawyer*, Vol 48, pp. 59-77. (1992).
- [23] Kaplan, S., Reishus, D., “Outside directorships and corporate performance”. *Journal of Financial Economics*, Vol 27, No 2, pp. 389–411. (1990) [https://doi.org/10.1016/0304-405X\(90\)90061-4](https://doi.org/10.1016/0304-405X(90)90061-4)
- [24] Brickley, J.A., Coles, J.F., Terry, R.L., “Outside directors and the adoptions of poison pills”. *Journal of Financial Economics*, Vol 35, No. 3, pp. 371-390, (1994), [https://doi.org/10.1016/0304-405X\(94\)90038-8](https://doi.org/10.1016/0304-405X(94)90038-8)
- [25] Chen, Y.-R., Chuang, W.-T. “Alignment or entrenchment? Corporate governance and cash holdings in growing firms”. *Journal of Business Research*, Vol 62, No 11, pp. 1200–1206. (2009), <https://doi.org/10.1016/j.jbusres.2008.06.004>
- [26] Ozkan, A., Ozkan, N., “Corporate cash holdings: an empirical investigation of UK companies”. *Journal of Banking & Finance*, Vol 28, No 9, pp. 2103–2134. (2004), <https://doi.org/10.1016/j.jbankfin.2003.08.003>
- [27] Jensen, M. C. “The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems”. *The Journal of Finance*, Vol 48, No 3, pp. 831–880. (1993), <https://doi.org/10.1111/j.1540-6261.1993.tb04022.x>
- [28] Dahya, J., Travlos, N.G. “Does the one man show pay? Theory and evidence on the dual CEO revisited”. *European Financial Management*, Vol 6, No 1, pp. 461–483. (2000), <https://doi.org/10.1111/1468-036X.00113>
- [29] Yudaruddin, R. “Determinants of corporate cash holdings: Evidence of the mining sector in Indonesia”. *International Journal of Scientific & Technology Research*, Vol 8, No 10, pp. 1523-1526. (2019).
- [30] Baltagi, B.H. “Econometric Analysis of Panel Data”. John Wiley and Sons, West Sussex. (2008).
- [31] Kennedy P. “A Guide to Econometrics”. Malden, Massachusetts: Blackwell Publishing. (2008).
- [32] Arellano, M., Bond, S.R. “Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations”. *Review of Economic Studies*, Vol 58, pp. 277–297. (1991), <https://doi.org/10.2307/2297968>
- [33] Blundell, R., S. Bond. “Initial Conditions and Moment Restrictions in Dynamic Panel Data Models”. *Journal of Econometrics*, Vol 87, No 1, pp. 115–143. (1998), [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
- [34] Lasfer., M. A., “The Interrelationship Between Managerial Ownership and Board Structure”. *Journal of Business Finance & Accounting*, Vol 33, No 7 & 8, pp. 1006 –1033. (2006), <https://doi.org/10.1111/j.1468-5957.2006.00600.x>