



## CORPORATE GOVERNANCE AND CASH HOLDINGS IN HOSPITALITY FIRMS: DO BOARD CHARACTERISTICS MATTER?



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### ABSTRACT

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This paper study the relationships between corporate governance mechanisms and cash holdings, and the joint effects on firm performance. We test if these governance attributes are related to cash holdings among firms in the hospitality industry. Our sample consists of public listed hospitality firms in Malaysian and Singapore from the year 2005 to 2013. Different from the past literature which mainly adopted the ordinary least squares regression (OLS) model, this study uses panel regression tests to test the link between the variables and the cash holdings level. We adopt the generalized method of moment (GMM) estimation to control the possible endogenous problem. The results indicate that board of director characteristics plays a pivotal role in cash holdings. We find that board independence, board duality, board busyness and ownership structure are significantly associated with the cash reserves. We find that although the relationship between good governance and corporate liquidity are not significant during crisis in general, the benefits are more pronounced during sudden crisis (Cobra type). The impact of such crisis is found to be significantly alleviated for firms with high cash holdings and good governance. The findings should provide valuable information in developing strategies on cash management. This study provides insight on the importance of the disciplinary and monitoring role of boards of directors.

**Contribution/ Originality:** This study contributes to the existing literature by investing the relationships between corporate governance mechanisms and cash holdings, and the joint effects on firm performance.

### 1. INTRODUCTION

Efficient allocation of firms' resources is crucial for corporate sustainability. However, cash policy is a matter of managerial discretion. Unlike other assets, cash can be easily converted into personal benefits at the expense of shareholders (Myers & Rajan, 1998). Managers tend to hold cash rather than paying off their shareholders based on agency theory (Dittmar, Mahrt-Smith, & Servaes, 2003; Jensen, 1986). Weak corporate governance further fueled the tendency that managers prefer to hoard excess cash (Dittmar et al., 2003). Therefore, it is challenging for firms to determine the optimal level of cash holding in the presence of the agency cost.

In mitigating agency problem, effective corporate governance is necessary. According to Harford, Mansi, and Maxwell (2008) the aim of effective internal governance is to ensure appropriate levels of cash in firms. Corporate governance mechanism such as the role of the board of directors plays essential roles in explaining corporate cash policy. The previous study such as Ooi, Hooy, and Som (2015) shows that the monitoring role of the board of

directors is more prominent in hospitality firms. This is due to the uncertain exposures of the hospitality industry (Hsu & Jang, 2008; Hua, 2013; Kim & Ayoun, 2005; Singal, 2015). Besides, hospitality firms are exposed to seasonality and high volatility in operating cash flows (Hsu & Jang, 2008; Pegg, Patterson, & Gariddo, 2012; Scott & McBoyle, 2007) and the fluctuation of the tourism demand due to macroeconomic factors or external shocks (Kosová & Enz, 2012; Kuo, Chen, Tseng, Ju, & Huang, 2008; Song, Lin, Witt, & Zhang, 2011; Wang, 2009). Different from the other industries, hospitality firms are required to continually strategize to accommodate to the environments that change rapidly (Pizam & Shani, 2009; Singal, 2015). In this case, board characteristics are essential to examine the changing landscape of the hospitality industry and the behavior of hospitality firms. The competency of the board of directors is especially vital to capture the competitive advantages via better supervision and strategic planning. Hospitality firms such as restaurants had been characterized as a business that operate in a highly competitive and saturated market in which financial and operational risks are high (Kim, Kim, & Woods, 2011). Besides financial risks, the hospitality industry is highly vulnerable to political and financial instability, external shocks and tourism crisis, such as the spread of pandemic diseases, terrorism and other natural disasters especially in Southeast Asia (Chheang, 2013). Such events result in a significant adverse effect towards the performance of hospitality firms. The impact is largely beyond the control of the organisation as reported by previous studies (Chen, Jang, & Kim, 2007; Chen, Kim, & Kim, 2005; Mat Som, Ooi, & Hooy, 2014; McAleer, Huang, Kuo, Chen, & Chang, 2010; Song et al., 2011). Since the mid-1990s, South East Asia has experienced some crises triggered by a variety of occurrences. Major events include Asian financial crisis in 1997; natural disasters such as the tsunami in 2004; pandemic diseases such as Severe Acute Respiratory Syndrome (SARS) in 2003, swine flu (H1N1) and avian flu. These events result in a drastic decline in travel demand subsequently negatively impacted the hospitality industry (Chen et al., 2007; Kuo et al., 2008; McKercher & Chon, 2004). The mentioned impacted adversely on firm performance in the hospitality industry and may endanger the sustainability of the business operation. However, the role of cash remains unclear in association with the crisis. Therefore, cash management is essential for hospitality firms during good times and even more so during uncertain economic conditions. It will be interesting to understand the determinants of cash holdings in the hospitality industry and its cash policies. The remainder of this paper is organized as follows. Section 2 discusses the theoretical framework. A brief literature review and formulation of research hypotheses are presented in Section 3. The section is followed by Section 4 where the detailed methodology adopted in this study is presented. Empirical results and discussion are discussed in Section 5. Finally, Section 6 concludes the study and indicates its theoretical and practical implications.

## 2. THEORETICAL FRAMEWORK

A major component of corporate governance mechanism is the board of directors. Zahra and Pearce (1989) identified three leading roles played by the boards. The leading roles include control, strategy, and service. From the viewpoint of agency theory, the board of directors serves as a vital mechanism to alleviate the conflicts of interest between the principal and agent (Daily, Dalton, & Cannella, 2003; Garner, Kim, & Kim, 2017; Rediker & Seth, 1995). Hence, the primary role of boards of directors is to lessen the costs of the agency that resulted from the separation of ownership and control. The board helps to ensure that the firm's activities are carried out in the best interests of shareholders (Fama & Jensen, 1983). It also performs a significant monitoring role in handling agent problems. Also, effective governance has a close link to service quality and financial performance of hotel firms (Guetat, Jarboui, & Boujelbene, 2015; Jarboui, Guetat, & Boujelbene, 2015). They play an essential role to closely monitor and supervise strategic decisions made by the managers. Boards of directors are formed to keep track of the management on behalf of the company shareholders and to assess the firm performance (Payne, Benson, & Finegold, 2009; Rediker & Seth, 1995). As from the resource dependence theory perspective, the strategic function of the boards of directors is to develop and execute the goals and policies of the firm. On the other hand, the service role is associated with obtaining essential resources for the firm (Huse, 2005). Consistent with the resource

dependence theory by Pfeffer and Salancik (2003) (as cited in Hillman, Withers, and Collins (2009)) several studies such as Brown (2005) and Miller-Millesen (2003) identified the board as a key resource for the firm. Figure 1 presents the theoretical framework in this study.

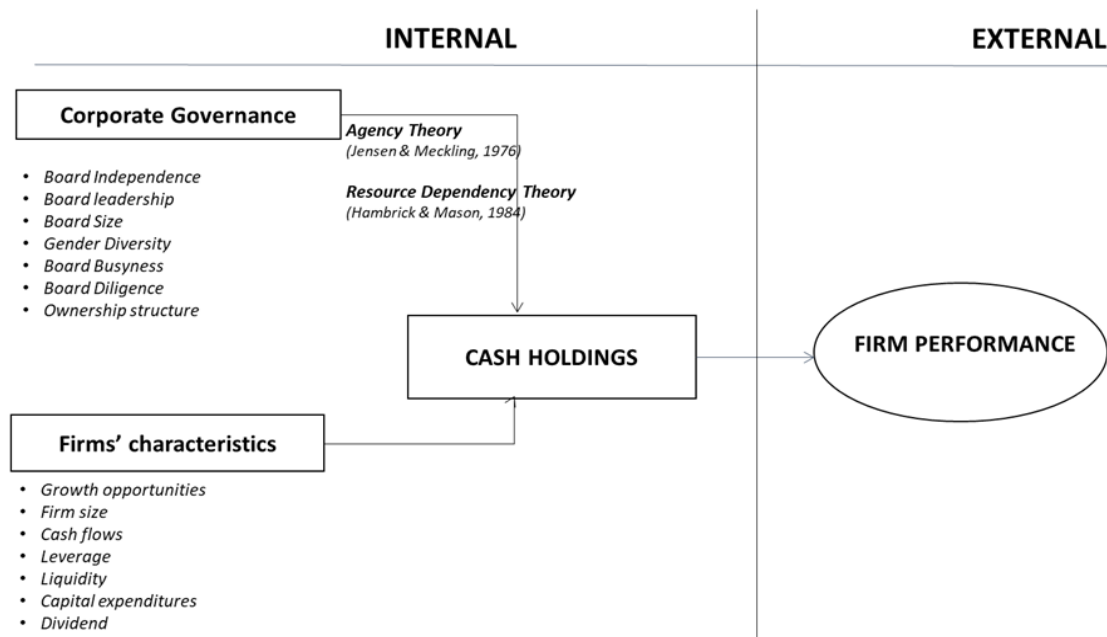


Figure-1. Theoretical framework.

Source: Kwan (2018).

### 3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Past literature has found that corporate governance mechanism is significantly related to corporate cash holdings decisions (Dittmar et al., 2003; Guney, Ozkan, & Ozkan, 2007; Kusnadi, 2011; Opler, Pinkowitz, Stulz, & Williamson, 1999). The mechanisms include board structures; ownership concentration; and shareholders' rights. The findings support the agency theory that posits that sound governance mechanisms reduce abuse of powers by managers and enhance firm value (Dittmar & Mahrt-Smith, 2007). The following section will discuss on important governance attributes as identified in previous literature and development of the hypothesis to be tested in this study.

#### 3.1. Board Independence

Board independence has been extensively explored in the literature using agency theory. The board independence (BIND) is computed by the percentage of independent directors on the board. Agency theory argues that to monitor the managers effectively; the firm should have a monitoring mechanism in place to oversee the managers and protect the shareholders (Fama & Jensen, 1983). Although the past findings are ambiguous, board independence is still considered desirable in the hotel industry. The monitoring function is vital in a highly competitive market such as hospitality firms. Boards must supervise and ensure that the managerial activities are executed efficiently to enhance product quality and to provide needed products. Agency theorists argue that independent board members can withstand the influence of managers and provide independent supervision on managerial activities (Dalton, Daily, Johnson, & Ellstrand, 1999; John & Senbet, 1998). The hypothesis is formulated as follows.

*Hypothesis 1: There is a negative relationship between board independence and the level of cash holdings.*

### 3.2. Board Duality

An independent board and a CEO non-duality structure are favored by agency theory to monitor management effectively (Fama & Jensen, 1983). This theory suggests that independent board members who are independent of management tend to more closely supervise the managerial activities and exert more vigilance than dependent board members (Bushman & Smith, 2001; Fama & Jensen, 1983). Also, a separate from CEO and board chairperson can prevent a powerful CEO or board chairperson. Such separation helps the board chairperson exercise the duty of independent supervision and generate active discussions of managerial activities with CEOs (Yeh, 2013).

Previous studies indicate that board duality impacts the firm performance negatively. Based on the arguments above, the following hypothesis is formulated. We assign a dummy for duality variable (DUAL) that equals one if the CEO is also the chairman; it equals zero otherwise.

*Hypothesis 2: There is a positive relationship between board duality and the level of cash holdings.*

### 3.3. Board Size

Board size (BSIZE) is computed by the number of directors sitting on the board. According to Boubaker, Derouiche, and Nguyen (2015) board size is a proxy for board monitoring quality. An optimal number of board members will enable better monitoring of managerial activities and behavior. Board's performance is mainly dependent on the ease of communication, which subjects the number of directors in the boardroom. As highlighted in Nguyen, Locke, and Reddy (2015b) the relationship between board size and cash holdings depends on the theoretical perspective. From the viewpoint of agency theory, smaller boards are more efficient (Yermack, 1996) and may positively relate to the firm performance. The larger the number of board of directors does not necessary means better performance. As the number of members increases, the coordination becomes more complicated and time-consuming among multiple individuals. Not only it impedes the decision making; bigger groups may invite more free riders which lead to poor coordination. Larger boards are therefore associated with higher cash reserves as cash is an easy channel for wealth expropriation (Mak & Kusnadi, 2005). However, resource dependence theorists suggest that larger board size is positively related to performance (Al-Najjar & Clark, 2017; Dalton et al., 1999; Kusnadi, 2011). Therefore, the previous empirical evidence is mixed thus no consensus has been reached. Based on this, board size could be either positively related (agency theory) or negatively related (resource dependence theory) to the level of cash. The following hypothesis is developed.

*Hypothesis 3: There is a positive (agency theory) or negative (resource dependence theory) relationship between board size and the level of cash holdings.*

### 3.4. Gender Diversity

Studies focusing on the association between board gender diversity and firm performance have emerged in the recent years. Roles of female board of directors have slowly gained interest by some recent studies (Julizaerma & Sori, 2012; Low, Roberts, & Whiting, 2015; Nguyen, Locke, & Reddy, 2015a). The board gender is documented that it impacts the corporate decisions in recent literature. The differences are mainly arising from risk preferences. According to Barber and Odean (2001) women are more risk-averse than their male counterpart. Past research also finds that female manager made a more ethical corporate decision and focused less on personal benefits in the company than men. Therefore, firm performs better under the leadership of a female compared to men (Low et al., 2015). Böhren and Staubo (2016) find that a mandatory on gender balance on corporate boards in Norway is related to increased board independence. However, it leads to decline in the value of the firm. The case for higher female board representation commonly rests on four criteria. The hypothesis is formulated as follow and the gender diversity (GENDER) is computed by the percentage of female members on the board.

*Hypothesis 4: There is a positive relationship between board diversity (higher percentage of female on the board) and the level of cash holdings.*

### 3.5. Board Busyness

Board busyness had been highlighted in recent literature (Boubaker et al., 2015). BDBUSY is defined as the number of directors holding more than two directorships outside the firm divided by a total number of directors on board. Aligned with agency theory, recent findings show that board busyness may lead to poor board performance (Falato, Kadyrzhanova, & Lel, 2014; Ferris, Jagannathan, & Pritchard, 2003; Jiraporn, Singh, & Lee, 2009; Rouyer, 2016). According to Falato et al. (2014) the busy board is detrimental to board monitoring quality and shareholder value. As board engages in multiple directorships, they may not be able to commit and cope with their busy schedule. Such over-commitment weakens the board monitoring quality and not able to perform adequately. In a similar vein, Jiraporn et al. (2009) reported that the higher number of directorship, the greater the absence of director from board meetings. Besides, overstretched directors on the board may also hurt the company especially when the ownership is concentrated. High concentrated ownership lead to higher information asymmetry, and lack of transparency. The following hypothesis is formulated.

*Hypothesis 5: There is a positive relationship between board busyness and the level of cash holdings.*

### 3.6. Board Diligence

Diligent boards are more likely to perform their duties effectively since boards that actively monitor managers are tend to keep managers' incentives aligned with the benefit of shareholders (Villanueva-Villar, Rivo-López, & Lago-Peñas, 2016). Therefore, board monitoring is a crucial indicator of governance quality. Vafeas (1999) is among some of the studies which indicate that boards that meet frequently are likely to enhance board effectiveness, especially in the financial reporting process. Similar to Foo and Zain (2010) and Hsu., Huang, and Lai (2015) we measure board diligence by the number of board meetings. More effective monitoring is expected with the diligent board and therefore keep agency problems low. This can be achieved through lower information asymmetry and greater voluntary information disclosure. The hypothesis is thus formulated as follow:

*Hypothesis 6: There is a positive relationship between board diligence and the level of cash holdings.*

### 3.7. Ownership Structure

Managerial ownership is regarded as a vehicle to prevent agency conflicts between managers and the owner (Jensen. & Meckling, 1976). The board is set up to monitor managerial behavior and to reduce agency conflicts as well as opportunistic behavior by managers (Fama & Jensen, 1983; Jensen. & Meckling, 1976). As highlighted in Yeh (2013) the core products of many firms are services in the hospitality industry. Leisure service firms have been recommended to use managerial ownership to motivate managers, thereby improving firm performance. It is therefore expected that managerial ownership is an effective way to align managers' incentive with the owner's interests in the hospitality industry. Based on the above reasoning, this study develops the following hypothesis. The managerial ownership (INSIDER) is measured by the percentage of total shares owned by a firm's managerial personnel.

*Hypothesis 7: There is a positive relationship between managerial ownership and the level of cash holdings.*

## 4. METHODOLOGY

### 4.1. Sample and Data

The initial sample includes all 58 hospitality firms which are listed on the Bursa Malaysia and the Singapore Stock Exchange (SGX). The sample hospitality sectors are selected based on the definition of hospitality provided by Pizam (2009). The hospitality industry is identified using the North American Industrial Classification System (NAICS) defines the following codes for various aspects of the hospitality industry: Arts, Entertainment and Recreation (71), Accommodation and Food Services (72), Accommodation (721), Food Services and Drinking Places (722). Selections of firms are based on the availability of annual reports. Data are obtained from ISI Emerging



Markets Database and Datastream Database. Data on board characteristics were extracted from the annual reports of the selected firm. The annual reports are downloaded from Bursa Malaysia database and respective companies' official website. The source for other control variables is from Emerging Markets Information Service (EMIS). The sample was then further narrowed down based on the availability of financial and corporate governance data from the data sources. Firms with incomplete data, and negative book equity values were removed. After these filtering procedures, the final sample consists of a total of 468 firm-year observations. A balanced panel of 52 firms covering from the year 2005 to 2013 is used for this study. Only firms which have a complete set of data from the year 2005 to the year 2013 are included in the study. One of the data collection measures taken was to make sure that there is no missing data for the primary variables used in the analyses. Although the actual analysis was done was between 2005 and 2013, data must be available from the year 2000 to 2013. There was a need to have data for a more extended period for analysis. For instance, cash flow variability needs the data for the past five years for computation.

#### 4.2. Definition and Typologies of Tourism Crises

As documented by Ghaderi, Mat Som, and Henderson (2012) business crises can be classified based on measures such as underlying reasons, gravity, form, and scale. For example, Seymour and Moore (2000) classify crisis into two groups based on the crisis gestation period to occur. They name the crisis which occurs in sudden and unexpected as Cobra. On the other hand, Python is used to refer to the crisis which occurs gradually over more extended gestation period. They denote that Cobra (Sudden) crises are inherently more difficult to be managed than Python (Gradual) crises. Likewise, Booth (1993) also uses the same approach to classify types of crisis. The crisis is divided into three categories which are: gradual, periodic and sudden. Seymour and Moore (2000) and Booth (1993) both agree that the Cobra-type of crisis (sudden threat) triggers defensive response with reliance on the known and trusted. On the contrary, Python-type of crisis (periodic threat) tends to creep upon a company gradually. Such crisis would trigger a bureaucratic response when the crisis is not identified. However, the organizations would execute negotiated response once the crisis is identified. Nonetheless, the limited empirical evidence is provided in the literature on the impact of the individual type of crisis towards the hospitality firms.

#### 4.3. Model Specification and Variables Measurement

Unlike most of the past literature which mainly adopted the ordinary least squares regression (OLS) model, this study uses panel regression tests to test the link between the variables and the cash holdings level as discussed in section 0. We use panel data analysis which includes static and dynamic panel models. The three static panel data models are pooling ordinary least squares (OLS) model, random effect model and fixed-effect model. However, previous studies documented that static models tend to be biased as the lagged dependent variable becomes one of the independent variables, there will be a correlation between this lagged dependent variable and the rest of the explanatory variables. This study relates internal governance mechanism to the cash policy in hospitality firms and examine their impact on corporate cash holdings. However, modeling the relationship between the two could be problematic because of endogeneity problem. Thus, proper treatment needs to be done. As recommended in Ozkan and Ozkan (2004) and Uyar and Kuzey (2014) we adopt the generalized method of moment (GMM) estimation to control the endogenous problem.

$$\begin{aligned}
 CASH_{it} = & \beta_0 + \beta_1 BIND_{it} + \beta_2 ACIND_{it} + \beta_3 BNED_{it} + \beta_4 DUAL_{it} + \beta_5 BSIZE_{it} + \beta_6 GENDER_{it} + \beta_7 BDBUSY_{it} \\
 & + \beta_8 BDMEET_{it} + \beta_9 ACMEET_{it} + \beta_{10} LARGE_{it} + \beta_{11} INSIDER_{it} + \beta_{12} GRO + \beta_{13} SIZE_{it} \\
 & + \beta_{14} CF_{it} + \beta_{15} VAR_{it} + \beta_{16} LEV_{it} + \beta_{17} LIQ + \beta_{18} CAPEX_{it} + \beta_{19} DIV_{it} + \alpha_t + u_{it}
 \end{aligned} \tag{1}$$

The dependent variable in the model is cash holdings (CASH). Similar to the previous studies such as Ozkan and Ozkan (2004); Bigelli and Sánchez-Vidal (2012) and Al-Najjar and Clark (2017) CASH is measured using the

ratio of cash and cash equivalents to the total assets. Independent variables measure the efficacy of corporate governance in hospitality firms by including board independence (IND, ACIND and BNED), board leadership (DUAL), board size (BSIZE), Board busyness (BBUSY) and ownership structure (LARGE and INSIDER). Given that cash holdings are firm-specific; this study includes control variables to control firm-specific effects. Following Opler et al. (1999) control variables in this study include growth opportunity (gro), firm size (Size), cash flow variability (var), leverage (lev), liquid asset substitutes (liq), capital expenditure (CAPEX), and the dividend dummy (Div). Details of the variables measurement are listed in Table 1.

Table-1. Summary variables description.

Variable	Variable name	Description	Source
<b>Dependent Variable</b>			
Cash ratio	CASH	Logarithm of (Cash & Cash equivalent)/ Total Assets	Ozkan and Ozkan (2004)
<b>Independent Variables</b>			
<i>Board Independence</i>			
Independent directors	BIND	Percentage of independent directors on the board	Cai, Liu, and Qian (2009)
Audit Committee	ACIND	Percentage of independent directors on the audit committee	Cai et al. (2009)
Non-exec directors	BNED	Percentage of non-executive directors on the board	Cai et al. (2009)
<i>Board Leadership</i>			
CEO Duality	DUAL	A dummy variable that equals one if the CEO is also the chairman; it equals zero otherwise.	Yeh (2013)
<i>Gender Diversity</i>			
Board gender	GENDER	Percentage of female members on the board.	Low et al. (2015)
<i>Board Size</i>			
Board Size	BSIZE	Number of board members	Boubaker et al. (2015)
<i>Board busyness</i>			
Busyness	BDBUSY	Number of directors holding more than two directorships outside the firm divide by total no. of directors on board	Boubaker et al. (2015)
<i>Board Diligence</i>			
Board meeting frequency	BDMEET	Number of board meetings during the year	Vafeas (1999)
Audit committee meeting frequency	ACMEET	Number of audit committee meetings during the year	Foo and Zain (2010)
<i>Ownership Structure</i>			
Large Shareholder	LARGE	Percentage of total shares held by large shareholders. Top 10 shareholders or shareholders who own more than 5% of total shares but are neither managerial personnel nor board members.	Yeh (2013)
Managerial Ownership	INSIDER	% of total shares owned by a firm's managerial personnel.	Yeh (2013)
<b>Control Variables</b>			
Firm size	SIZE	Natural logarithm of total assets	Opler et al. (1999)
Cash flow	CF	(Earnings before tax + depreciation & amortization) / Total assets	Opler et al. (1999)
Growth opportunities	MTB	Market to book ratio	Opler et al. (1999)
Leverage	LEV	Total liabilities/ Total assets	Opler et al. (1999)
Dividend	DIV	Dummy variable: 1- if dividend is paid; 0= if dividend is not paid	Opler et al. (1999)
Capital expenditures	CAPEX	Total capital expenditures	Opler et al. (1999)
Liquidity asset substitutes	LIQ	(Current assets- current liabilities- cash & equivalents)/ Total assets.	Opler et al. (1999)

## 5. EMPIRICAL RESULTS AND DISCUSSION

### 5.1. Descriptive Statistics

Table 2 presents the descriptive statistics for the board attributes, ownership structure, and control variables. The statistics suggest that the average cash ratio is 9.7% among hospitality firms in Malaysia while the average for Singapore is about 20.7%. The result for Singapore is relatively high compared to the previously reported average such as Kim. et al. (2011). The lowest ratio for the cash holdings is about 0. The highest cash ratio implies approximate 70 cents for every dollar in assets in the total sample.

Table-2. Descriptive Statistics (by Country).

Variable	Malaysia					Singapore				
	mean	p25	median	p75	sd	mean	p25	median	p75	sd
ind	0.466	0.375	0.429	0.556	0.12	0.452	0.375	0.444	0.571	0.141
acind	0.381	0.308	0.375	0.429	0.124	0.465	0.375	0.5	0.6	0.157
bned	0.643	0.5	0.667	0.778	0.154	0.597	0.5	0.6	0.692	0.144
dual	0.212	0	0	0	0.41	0.472	0	0	1	0.5
bsize	7.661	6	7	9	2.333	7.146	6	7	8	2.39
gender	0.109	0	0.0714	0.182	0.136	0.117	0	0	0.167	0.182
bdbusy	0.45	0.25	0.429	0.667	0.261	0.304	0.143	0.286	0.429	0.227
bdmeet	5.945	4	5	6	3.395	4.198	4	4	5	1.566
acmeet	5.085	4	5	6	1.345	3.751	3	4	4	1.537
large	0.391	0.317	0.397	0.504	0.221	0.586	0.505	0.605	0.735	0.202
insider	0.098	0.000518	0.00317	0.125	0.166	0.16	0.00103	0.0161	0.311	0.223
cash	0.0966	0.0338	0.072	0.141	0.0827	0.207	0.0582	0.138	0.325	0.188
gro	0.544	0.24	0.4	0.71	0.458	0.934	0.49	0.74	1.1	0.901
size	6.349	5.232	6.423	7.219	1.517	5.401	3.512	5.661	6.948	2.067
cf	0.0176	-0.00593	0.0201	0.0419	0.0694	-0.0759	-0.0348	0.00593	0.0664	1.562
var	0.0332	0.0111	0.024	0.0426	0.0388	0.268	0.0188	0.0404	0.11	1.558
lev	0.428	0.284	0.439	0.566	0.188	0.472	0.318	0.454	0.591	0.206
liq	-0.025	-0.0719	-0.0122	0.0518	0.116	-0.0645	-0.151	-0.0401	0.048	0.205
capex	0.0269	0.00626	0.0137	0.0331	0.0363	0.0599	0.00997	0.0277	0.0813	0.0805
div	0.765	1	1	1	0.425	0.773	1	1	1	0.42

Table 2 summarises the minimum, maximum, mean, and standard deviation of each of the variables in both countries. The average for board size is 7.3. The number of board of directors ranges from 3 to 17 in the sample. Regarding board duality, a 37 percent of the board which has the same person holding the Chairman and the CEO position simultaneously, is recorded. A mean of 13.6 percent of the board is directors. Also, the obtained results imply a significant presence of large shareholders on the boards of firms in Malaysia and Singapore. The mean of large shareholders representation is 54% while its median is 51%. The first and third quartile values of 38 percent and 70 percent respectively.

Table 3 reports the correlation matrix and variance inflation factors (VIF) for the explanatory variables used in this study. The obtained results from the variation inflation factor (VIF) test are less than 2 in general. This does not suggest the presence of any severe multicollinearity in our regression models.

### 5.2. Panel Regression Analysis

GMM regression is adopted in this study as recommended by Ozkan and Ozkan (2004). The authors suggest that there is a delay in cash holdings adjustment due to the transaction and adjustment costs. In that case, GMM regressions are deemed to be more suitable for estimating the determinants of cash holdings. We use the first-difference specification of GMM estimates to re-examine the effect of corporate governance on cash holdings. Table 4 presents the results of the regression analysis. We treat the lagged cash as endogenous and thus an instrument variable is used. The coefficient of lagged cash is positive and significant which indicate that corporate cash is serially related in all models. Therefore, GMM estimation will give a better insight to test the impact of internal



governance mechanism on cash holdings. Also, the results suggest that the impact of corporate governance is more significant in dynamic-panel compared to the one in static-panel estimations.

**Table-3.** Pearson correlation matrix and variance inflation factors.

	lncash	gro	size	cf	var	lev	liq	capex	div	VIF
<b>Malaysia</b>										
lncash	1									
gro	0.263***	1								1.31
size	0.431***	0.182***	1							1.41
cf	0.191***	0.433***	0.317***	1						1.6
var	-0.0516	0.00902	-0.225***	-0.131**	1					1.16
lev	0.0616	-0.279***	0.224***	-0.273***	0.0383	1				1.38
liq	0.282***	0.161**	0.109*	0.255***	-0.152**	-0.264***	1			1.16
capex	-0.121*	-0.0263	-0.128*	-0.0713	0.0757	-0.0418	0.0171	1		1.03
div	0.215***	0.194***	0.307***	0.382***	-0.303***	-0.124*	0.0609	-0.151**	1	1.34
<b>Singapore</b>										
lncash	1									
gro	0.150***	1								1.47
size	-0.488***	-0.0235	1							1.33
cf	-0.0770	-0.0518	0.0598	1						1.32
var	0.120**	-0.0311	-0.207***	-0.245***	1					1.2
lev	-0.0990**	0.178***	-0.104**	0.126***	0.100**	1				1.17
liq	-0.315***	-0.118**	0.384***	-0.0353	-0.113**	-0.379***	1			1.14
capex	0.213***	-0.00626	-0.305***	0.0104	-0.0306	0.0959**	-0.309***	1		1.1
div	-0.0497	-0.0799*	0.243***	0.0267	-0.130***	-0.319***	0.238***	-0.0371	1	1.05

Board independence shows the significant and negative effect on cash holdings. The finding is consistent with Hypothesis 1 that board independence provides better shareholder protection by reducing cash holdings. In model (1), the coefficient of DUAL is positive and significant at the 1% level. This result suggests that firms with CEOs who also chair the board of directors have a higher level of cash. In another word, the findings indicate that firms with higher board independence and board duality have lower cash holdings. Contrary to the previous result such as Yermack (1996) which suggest that that larger boards are associated with greater inefficiencies and coordination problems, we find otherwise. Based on our result, corporate cash holdings are negatively associated with board size. The result suggests that our findings are more in line with resource dependence theory (RDT). According to RDT, larger board size is positively related to performance (Dalton et al., 1999). In addition, ownership structure shows a positive and significant effect on cash holdings that is consistent with Hypothesis 7. All in all, our results suggest that stronger boards are related to better internal governance which enhances the monitoring of managerial discretion over cash policy. The impact of board busyness on corporate cash holdings is also examined and presented in Model 5 in 4. The coefficient estimate of the variable BDBUSY is positive and statistically significant at the 1 % confidence level. Unlike previously formulated hypothesis, the results show that board busyness has a positive relationship with the level of cash. This result suggests that overcommitted directors who are unable to fulfill the duties such as effective monitoring as required.

## 6. FURTHER TESTS

### 6.1. Impact of Excess Cash and Board Attributes on Firm Performance during Crisis

We now study the impact of excess cash (EXCESS) on firm performance. We also focus on the moderating effect of internal governance and presents the results in Table 5. In Column (1), the coefficient of the stand-alone lagged excess cash ( $EXCESS_{i,t-1}$ ) shows that for firms that use excess cash holdings over the year, a more substantial beginning balance of excess cash results in lower future operating performance. The interaction  $lbbdbsy * EXCESS_{i,t-1}$  and  $lbdmeet * EXCESS_{i,t-1}$  is positive and significant, suggesting that the negative association between future return on assets and beginning balance of excess cash is mitigated in firms with an active board of directors and more frequent meetings.

Table-4. The effect of corporate governance on cash holdings (two step system GMM).

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DV= Incash							
Incash = L,	0.535*** (20.00)	0.534*** (20.34)	0.565*** (25.08)	0.541*** (20.37)	0.521*** (23.03)	0.510*** (20.40)	0.526*** (21.65)
IND	-0.779*** (-4.487)						
ACIND	1.071*** (10.29)						
BNED	0.599*** (4.393)						
DUAL		0.261*** (6.008)					
BSIZE			-0.0360* (-1.671)				
GENDER				-0.266 (-1.643)			
BDBUSY					0.379*** (3.913)		
BDMEET						-0.000590 (-0.0728)	
ACMEET						0.00151 (0.100)	
LARGE							0.688*** (4.777)
INSIDER							0.300* (1.903)
gro	0.259*** (4.629)	0.298*** (5.899)	0.259*** (5.986)	0.281*** (5.301)	0.291*** (6.443)	0.216*** (4.825)	0.257*** (5.458)
Variables (continued.)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Size	0.130** (2.291)	0.115** (2.260)	0.104** (2.038)	0.108** (2.150)	0.114** (2.146)	0.0827 (1.583)	0.0898 (1.464)
CF	0.0483 (0.388)	-0.132 (-1.188)	-0.0810 (-0.819)	-0.0904 (-0.854)	-0.124 (-1.314)	-0.0718 (-0.678)	-0.0844 (-0.870)
var	-0.114 (-0.463)	-0.241 (-1.088)	-0.180 (-0.831)	-0.232 (-1.116)	-0.0685 (-0.339)	-0.141 (-0.737)	-0.172 (-0.802)
lev	-1.431*** (-8.311)	-1.494*** (-10.15)	-1.451*** (-8.728)	-1.520*** (-9.663)	-1.371*** (-8.208)	-1.290*** (-8.067)	-1.397*** (-9.244)
LIQ	-0.173 (-1.051)	-0.00564 (-0.0366)	-0.141 (-0.890)	-0.133 (-0.771)	-0.00747 (-0.0446)	-0.144 (-0.968)	-0.0142 (-0.0932)
CAPEX	-2.298*** (-7.708)	-1.409*** (-3.564)	-1.443*** (-3.808)	-1.408*** (-3.839)	-1.441*** (-4.173)	-1.403*** (-4.336)	-1.636*** (-5.234)
Div	-0.0930** (-2.087)	-0.0799* (-1.884)	-0.0832* (-1.897)	-0.0582 (-1.297)	-0.0548 (-1.402)	-0.0124 (-0.241)	-0.0958** (-2.412)
Constant	-1.680*** (-5.116)	-1.277*** (-4.358)	-0.736* (-1.914)	-1.072*** (-3.897)	-1.397*** (-4.553)	-1.085*** (-3.811)	-1.411*** (-4.314)
Sargan Test	29.19126 (0.7024)	38.1502 (0.2863)	31.4763 (0.2520)	35.3783 (-0.403)	34.765 (0.4314)	34.701 (0.4344)	31.4202 (0.5947)
Instruments valid?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR(1)	-2.9664*** (0.0030)	-2.9916*** (0.0028)	-2.6249*** (0.0087)	-3.0029*** (0.0027)	-3.0151*** (0.0026)	-2.8872*** (0.0039)	-2.9694*** (0.0030)
AR(2)	1.3397 (0.1803)	1.1068 (0.2684)	1.024 (0.3058)	1.0127 (0.3112)	0.9445 (0.3449)	1.754 (0.0794)	0.99026 (0.3220)
Observations	350	354	354	354	353	352	353
Number of code	51	52	52	52	52	52	52

Note: t-statistics in parentheses.

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

Table-5. Subsequent operating performance on excess cash holdings during crisis.

Variables	Pooled Ols	Fe With Hetero & Serial Correlation	2-Step System Gmm With Robust Se
ROA = L,			0.702*
			(1.706)
EXCESS	-0.309*	-0.363	-1.740*
	(-1.677)	(-1.310)	(-1.898)
lindxEXCESS	0.226	0.342	3.300
	(1.142)	(1.503)	(1.333)
lacindxEXCESS	-0.196	0.0825	-1.556
	(-1.285)	(0.460)	(-0.716)
lbndexEXCESS	-0.0325	0.0503	-1.444
	(-0.297)	(0.653)	(-0.675)
ldualxEXCESS	-0.0223	-0.0143	-0.182
	(-0.648)	(-0.413)	(-0.324)
lbsizeEXCESS	0.00993	0.0147	0.0852
	(1.088)	(1.342)	(1.611)
lgenderEXCESS	0.117	0.0888	-0.0589
	(0.927)	(0.697)	(-0.157)
lbdbusyEXCESS	0.0218*	0.0445	0.214**
	(0.464)	(1.043)	(1.819)
lbdmeetEXCESS	0.0206*	0.0157	0.0714**
	(2.400)	(2.182)	(1.684)
lacmeetEXCESS	0.00675	-0.00575	0.00195
	(0.676)	(-0.678)	(0.0175)
llargEXCESS	0.0578	0.119	1.239
	(0.941)	(0.637)	(0.972)
linsiderEXCESS	-0.0729	-0.111	0.163
	(-0.745)	(-1.205)	(0.246)
lindxEXCESSxcsudden	-0.257	-0.393	-7.514
	(-0.759)	(-1.379)	(-1.111)
lacindxEXCESSxcsudden	0.449	0.176	8.127
	(1.263)	(0.717)	(1.519)
lbndexEXCESSxcsudden	0.182	0.110	3.402
	(0.955)	(0.769)	(0.576)
ldualEXCESSxcsudden	0.0253	0.0232	0.120
	(0.382)	(0.515)	(0.218)
lbsizeEXCESSxcsudden	0.00730	0.00386	0.0280
	(0.642)	(0.677)	(0.210)
lgenderEXCESSxcsudden	-0.181	-0.129	0
	(-0.803)	(-0.914)	
lbdbusyEXCESSxcsudden	0.0368	-0.0101	0.754
	(0.339)	(-0.194)	(0.816)
lbdmeetEXCESSxcsudden	-0.0231**	-0.0124	-0.109**
	(-2.283)	(-1.477)	(-2.388)
lacmeetEXCESSxcsudden	-0.00320	0.0116	-0.0660
	(-0.211)	(1.284)	(-0.415)
llargEXCESSxcsudden	-0.241*	-0.0151	-2.693
	(-1.688)	(-0.122)	(-1.229)
linsiderEXCESSxcsudden	0.0679	0.104	0.00561
	(0.370)	(1.029)	(0.00657)
lbsizeEXCESSxcgradual	0.0598	-0.00465	1.452
	(0.537)	(-0.123)	(0.537)
lbdmeetEXCESSxcgradual	-0.0639	0.0543	-2.187
	(-0.337)	(0.829)	(-0.498)
Constant	-0.0839	0.250	-0.0311
	(-1.123)	(2.165)	(-0.0755)
Sargan Test			8.929819
			(1.000)
			-1.7709
AR(1)			(0.0766)

			-0.14489
AR(2)			0.8848
Observations	337	337	337
R-squared	0.194	0.257	
Number of groups			
Number of code		51	51

Note: t-statistics in parentheses.  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table-6. Robustness tests.

VARIABLES	(1) White	(2) GLS	(3) GLS-cluster firm	(4) PCSE
cash = L,		-0.272	-0.272	-0.249***
		(0.176)	(0.261)	(0.0929)
gro	0.146	0.123*	0.123	0.0882
	(0.150)	(0.0709)	(0.122)	(0.0697)
Size	0.0966	0.0865	0.0865	0.0812**
	(0.202)	(0.0563)	(0.0657)	(0.0354)
CF	1.672	1.602***	1.602	1.600**
	(1.086)	(0.603)	(1.036)	(0.675)
var	0.00662	0.00702	0.00702	-0.0150
	(0.0184)	(0.0430)	(0.0171)	(0.0510)
lev	-1.722**	-1.321***	-1.321**	-0.231
	(0.661)	(0.291)	(0.588)	(0.259)
LIQ	-0.452	-0.420	-0.420	-0.0707
	(0.545)	(0.333)	(0.538)	(0.319)
CAPEX	-0.151	-0.139	-0.139	0.128
	(0.317)	(0.471)	(0.328)	(0.530)
Div	-0.184	-0.171	-0.171	0.0670
	(0.132)	(0.113)	(0.130)	(0.114)
IND	-0.869	-0.280	-0.280	0.387
	(0.597)	(0.519)	(0.615)	(0.499)
ACIND	-1.537*	-1.364**	-1.364	-0.249
	(0.849)	(0.540)	(0.889)	(0.580)
BNED	0.777	0.986***	0.986**	1.375***
	(0.489)	(0.322)	(0.472)	(0.254)
DUAL	0.503*	0.680***	0.680***	0.764***
	(0.300)	(0.176)	(0.182)	(0.122)
BSIZE	0.0180	-0.00219	-0.00219	-0.0152
	(0.0554)	(0.0300)	(0.0540)	(0.0283)
GENDER	0.851	0.385	0.385	0.0870
	(1.103)	(0.474)	(0.752)	(0.364)
BDBUSY	-0.395	-0.428*	-0.428	-0.245
	(0.467)	(0.251)	(0.311)	(0.181)
BDMEET	-0.00485	0.00572	0.00572	0.00804
	(0.0390)	(0.0175)	(0.0342)	(0.0159)
ACMEET	0.0370	0.0126	0.0126	-0.0366
	(0.0370)	(0.0320)	(0.0343)	(0.0257)
LARGE	0.503	-0.0977	-0.0977	-0.495**
	(0.495)	(0.325)	(0.408)	(0.235)
INSIDER	0.524	0.0998	0.0998	-0.632*
	(0.629)	(0.512)	(0.567)	(0.376)
Constant	-2.900*	-2.733***	-2.733***	-3.599***
	(1.533)	(0.540)	(1.019)	(0.468)

Note: Robust standard errors in parentheses.  
 \*\* p<0.01, \*\*\* p<0.05, \* p<0.1.

However, the interaction  $bdmeet * EXCASH_{i,t-1} * csudden$  is negative and significant, indicating that the negative relationship between firm performance and beginning balance of excess cash is more pronounced in firms

with during a sudden crisis. Furthermore, there is some evidence that in firms with high excess cash and larger board size experience poorer subsequent operating performance, as evidenced by the negative and significant coefficient on the BSIZE. In summary, our results suggest that the negative relationship between subsequent operating performance and excess cash in firms during a crisis is mitigated in firms with the presence of stronger board structure in Table 5.

## 6.2. Robustness Check

Several analyses to check the robustness of the results were conducted in this section. Firstly, the measure of cash holdings, natural logarithm of the ratio of cash to total assets (LNCASH) is re-estimated using Cash Ratio in the regression models. The results remain the same after the re-estimation as shown in Table 6. Secondly, cash holdings may be endogenous to some of the firm-level variables such as leverage, dividends and capital expenditure. In order to tackle this issue, lagged independent variables is used. The results remain the same with the previously reported findings. Thirdly, further robustness checks using various standard errors were performed, and the result is summarised. The results were obtained by regressing the yearly firm-level data of cash on the independent variables as listed in Section 4, with adjustments for white standard errors, standard errors with panel corrected standard errors (PCSE) and generalized least squares (GLS) estimates (Petersen, 2009). Virtually unchanged conclusions are obtained.

## 7. CONCLUSION

Overall, this study provides insight on the importance of the disciplinary and monitoring role of boards of directors. Directors play a major role as a governance mechanism, especially in the context of concentrated ownership. Agency problems are an essential factor in determining a firm's cash policy. Effective board should be able to reduce agency problem and protect shareholders' best interest instead of self-benefits. The conclusions are thus aligned with guidelines for good governance practices and the requirement that emphasize on the essence of the board of directors in enhancing governance quality, especially in hospitality industry.

This paper contributes to the existing literature in several ways. First, we test if these governance attributes are related to corporate cash holdings among firms in the hospitality industry. Second, following Dittmar et al. (2003) this study studies the collective effect of firm-level corporate governance mechanism and excess cash holdings on firm performance in the hospitality industry. Unlike the previous studies, we examine the impact of cash holdings on performance by taking into account of crisis typologies. Third, agency problem is addressed by adopting a broad range of firm characteristics which were found to be significant proxies for internal governance mechanisms in past studies. Example of governance variables includes board size, board duality, board independence and ownership structure. Also, additional attributes which are under-researched are studied as well. These include board diligence, gender diversity and board busyness which was found to be significantly impacting corporate performance and decision in recent years.

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