CASH HOLDINGS, CORPORATE GOVERNANCE AND FIRM PERFORMANCE IN HOSPITALITY INDUSTRY

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KUALA LUMPUR

2018

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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF ECONOMICS AND ADMINISTRATION
UNIVERSITY OF MALAYA
KUALA LUMPUR

2018

UNIVERSITY OF MALAYA

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Matric No: **EHA100036**

Name of Degree: **Doctor of Philosophy**

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Field of Study: **Corporate Finance**

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CASH HOLDINGS, CORPORATE GOVERNANCE AND FIRM PERFORMANCE IN HOSPITALITY INDUSTRY

ABSTRACT

This thesis consists of three essays on corporate cash holdings. The central theme of the dissertation is to study the impact of internal and external corporate governance mechanisms on firms' corporate cash management policy, and firm performance in the hospitality industry. The first essay of the dissertation examines the determinants of cash holdings using a sample of public listed hospitality firms in Malaysia firms from year 2002 to 2013. The non-parametric Wilcoxon-Mann-Whitney test was carried out to examine the time and sectoral differences in cash holdings. In addition, the panel regression techniques are used to investigate the relationships between firm characteristics and level of corporate cash holdings. The result revealed that larger and higher leveraged companies have lesser cash. Similarly, capital expenditures and liquid assets substitutes are found to have a negative effect on the level of cash. However, the cash flow, cash flow variability, growth opportunities and, dividend dummy were found to have a positive relationship with cash holdings decision. The result shows that cash holdings theories such as trade-off theory, the pecking order theory, and the agency theory, help explain corporate cash holdings behaviour of firms in emerging market, such as Malaysia. Besides, the findings show a significant impact of the tourism crisis on cash holdings in the industry. The second essay studies the relationships between corporate governance mechanisms and cash holdings, and joint effects on firm performance at the firm level. Using a panel data analysis of a sample of public listed hospitality firms in Malaysia and Singapore during the period from 2002 to 2013, the relationship between corporate governance and cash holdings is investigated. The results show that characteristics such as board duality and large board size are significantly related to corporate cash policies. The paper provides important evidence that corporate cash serves

as a valuable strategic asset, especially during a crisis. This study finds that the relationship between firm performance and cash holding are significantly moderated during tourism crisis. The results show that the stock market places a higher value on corporate cash holdings during the sudden crisis. Finally, the third essay presents a cross-country study using 1274 firm-year observations from 2001 to 2013 from public listed hospitality firms in ASEAN to test the impact of corporate governance on cash holdings. The relationship between external governance mechanism and cash holdings behaviour of firms at country-level are studied. The results show positive and significant relationship between the country-level control of corruption, regulatory quality, the rule of law, and corporate liquidity. However, there is no significant relationship between country-level political stability, voice and accountability and corporate liquidity. Further investigation was carried out to test the effect of tourism crisis and corporate liquidity. The results shall benefit various parties including the legislators and policy makers. Not only it serves as a strategic deterrence, but also helps firms to gauge opportunities.

Keywords: Cash Holdings, Corporate Governance, Hospitality Industry

PEGANGAN TUNAI, TADBIR URUS KORPORAT DAN PRESTASI FIRMA DALAM INDUSTRI HOSPITALITI

ABSTRAK

Disertasi ini mengandungi tiga esei mengenai pegangan tunai korporat. Tema utama disertasi ini adalah untuk mengkaji kesan mekanisme tadbir urus korporat dalam dan luar dasar pengurusan tunai korporat firma, dan prestasi firma dalam konteks industri hospitaliti. Esei pertama disertasi mengkaji penentu pegangan tunai menggunakan sampel syarikat hospitaliti tersenarai awam di Bursa Malaysia dalam tempoh dari 2002 hingga 2013. Untuk memeriksa masa dan perbezaan mengikut sektor dalam pegangan tunai, ujian bukan parametrik Wilcoxon-Mann-Whitney telah dijalankan. Di samping itu, teknik panel regresi digunakan untuk mengkaji hubungan antara ciri-ciri firma dan tahap pegangan tunai. Hasilnya menunjukkan bahawa syarikat-syarikat yang lebih besar, dan lebih dileveraj mempunyai wang tunai yang lebih rendah. Begitu juga, perbelanjaan modal dan pengganti aset mudah tunai didapati mempunyai kesan negatif ke atas tahap tunai. Sebaliknya, aliran tunai, ketidakstabilan aliran tunai, peluang pertumbuhan dan, dividen mempunyai hubungan yang positif dengan pegangan tunai keputusan. Hasilnya menunjukkan bahawa pegangan tunai teori seperti teori trade-off, teori Pecking Order, dan teori agensi, membantu menjelaskan korporat tingkah laku pegangan tunai firma dalam pasaran baru muncul seperti Malaysia. Selain itu, kajian menunjukkan kesan yang ketara krisis pelancongan ke atas pegangan tunai dalam industri. Esei kedua mengkaji hubungan antara mekanisme dalaman tadbir urus korporat dan pegangan tunai, serta kesan bersama mengenai prestasi firma. Menggunakan data panel sampel firma hospitaliti tersenarai awam di Malaysia dan Singapura dalam tempoh dari tahun 2002 hingga 2013, hubungan antara tadbir urus dan tunai pegangan korporat disiasat. Sifat-sifat seperti dualiti lembaga dan saiz lembaga pengarah yang besar didapati mempunyai lebih kuasa atas dasar tunai korporat. Kajian ini menyediakan bukti nyata bahawa tunai korporat

berfungsi sebagai aset strategik yang bernilai, terutamanya semasa krisis. Kajian ini mendapati bahawa hubungan antara prestasi firma dan pegangan tunai diredakan dalam keadaan krisis pelancongan. Keputusan menunjukkan bahawa pasaran saham meletakkan nilai yang tinggi ke atas pegangan tunai korporat semasa krisis secara tiba-tiba (Sudden Crisis). Akhir sekali, esei ketiga merangkumi kajian merentas negara menggunakan 1274 pemerhatian firma tahun 2001-2013 dari firma hospitaliti tersenarai awam di ASEAN untuk meneliti keberkesanan tadbir urus korporat ke atas pegangan tunai. Hubungan antara mekanisme luaran tadbir urus (peringkat negara) dan wang tunai pegangan tingkah laku firma yang dikaji. Hasil kajian menunjukkan hubungan yang positif dan signifikan antara kedaulatan negara peringkat undang-undang, kawal selia kualiti, kawalan rasuah dan mudah tunai korporat. Walau bagaimanapun, terdapat hubungan yang signifikan antara akauntabiliti peringkat negara, kestabilan politik dan mudah tunai korporat. Siasatan lanjut telah dijalankan untuk menguji kesan krisis pelancongan dan mudah tunai korporat.

Kata kunci: pegangan tunai, tadbir urus korporat, industri hospitaliti

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my advisor Associate Professor Dr Lau Wee Yeap for the continuous support of my PhD study and related research. You have been a tremendous mentor for me. Thank you for your patience, support, and immense knowledge. Thank you for encouraging my research and for allowing me to grow as a researcher. Your guidance helped me in all the time of research and writing of this thesis. Your advice on has been invaluable. I could not have imagined having a better supervisor and mentor for my PhD study. I would also like to thank the academic and administrative staff of the Faculty of Economic and Administrative, University of Malaya. I am especially grateful to Dr Cheong Kee Cheok, Professor Dr Goh Kim Leng, Dr Yong Chen Chen and Associate Prof. Dr Yew Siew Yong for their support and guidance. I would also like to thank Associate Professor Dr Rubi binti Ahmad, Associate Professor Dr Kwek Kian Teng and Dr Cheong Kee Cheok for the invaluable inputs and letting my defence be an enjoyable moment. Special thanks to my family. Words cannot express how grateful I am to my beloved mother, Mdm. Ling Siew Kiuk and my late father, Ir. Kwan Chiew Thim for all of the sacrifices that you have made. Your love and prayers have sustained me thus far. I would also like to thank my beloved sister, Dr Kwan Jing Wern; my beloved brothers, Dr Kwan Shiang Chung and Kwan Shiang Shen. Thank you for supporting me in everything I do. And to my beloved fiancé, Mr. Low Jing Hong, I cannot thank you enough for encouraging me throughout this journey. To my dear colleagues and friends, thank you for always being there for me. Last but not least, I thank my dear heavenly Father, for letting me through all the difficulties. I have experienced Your guidance each and every day. You are the one who made this possible. I will keep on trusting You for my future. Thank you, Lord.

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LIST OF SYMBOLS AND ABBREVIATIONS

MCCG	:	Malaysian Code of Corporate Governance
NAICS	:	North American Industry Classification System
CG	:	Corporate Governance
ASEAN	:	Association of Southeast Asian Nations
TOT	:	Tradeoff Theory
POT	:	Pecking Order Theory

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CHAPTER 1: INTRODUCTION

1.1 Corporate Cash Holdings Trend

Holding large amounts of cash is irrelevant in a perfect Modigliani-Miller world. Theoretically, corporate cash holdings decision is insignificant when perfect capital markets are assumed. Companies will subject to the same borrowing and lending rate. Therefore, companies shall have easy access to raise fund in the financial markets to finance their investment projects at minimal costs. However, it is not the case in an imperfect market.

1.1.1 Non-financial firms

There is a substantial upward trend observed among firms around the world in recent years. Non-financial firms maintain a sizable portion of their assets as cash. As shown in Figure 1.1, Bates & Kahle (2009) find that firms in the United States (US) doubled their cash holdings in the past three decades. US corporations have been holding a record-high amount of cash between 1995 and 2010, with an annual growth rate of 10% (Mun and Jang, 2015). According to Gao, Harford, & Li (2013), listed firms in the US hold a mean value of 20.45% of assets in cash in the year 2011. Cash holdings among non-financial firms in the US alone increased to a record $1.7 trillion in mid-2016 (Platt, 2016).

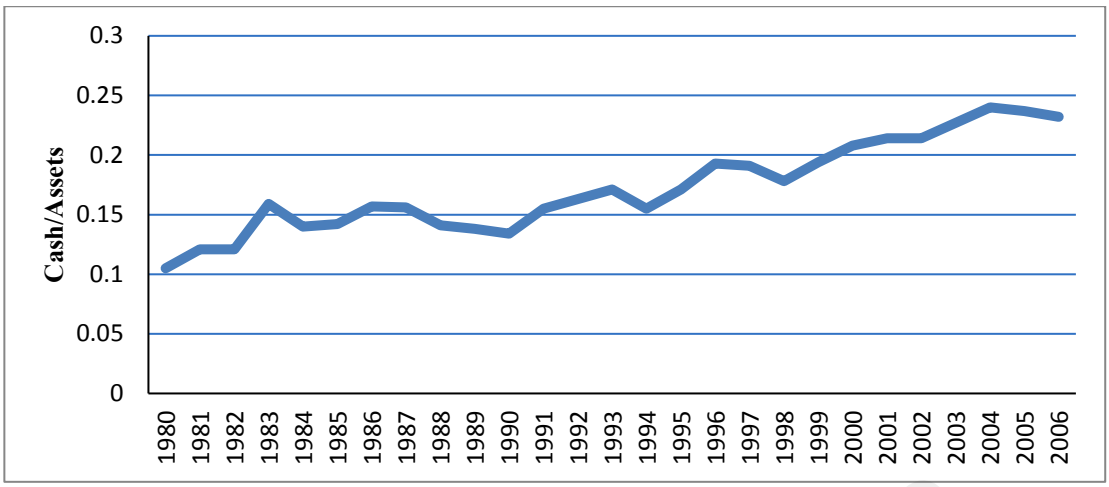


Figure 1.1: Average cash ratios among US firms (1980 to 2006)

The increasing trending in corporate cash holdings is not confined to the US. Iskandar-Datta & Jia (2012) revealed that the trend has spread to other large industrialised countries such as US, Canada, UK, Germany, France, Japan. Ferreira & Vilela (2004) study a sample of countries in the European Union such as Austria, Belgium, Finland, Spain, France, Germany, Luxembourg, Greece, Ireland, Italy, the Netherlands, and Portugal. The authors find that non-financial firms have on average around 15% of assets in cash holdings in Europe. Al-Najjar & Belghitar (2011) find that UK firms hold on average of 9% of the total assets in the form of cash. The median cash to total asset ratios varied over the period 1989 to 2009 from 2.3% for New Zealand to 3.6% in Russia, 5.2% in Australia, 8% in Finland, 10.1% in Sweden (Chen et al., 2015) and Australia. Thus, cash accounts for a sizeable asset for firms.

A similar trend is also observed in Asia. As published by The Economist (2014), large cash holdings amounted to 44% and 34% of GDP are observed in Japanese and South Korean firms respectively. Companies hold ¥229 trillion ($2.1 trillion) of cash in Japan, while South Korean firms hold 459 trillion won ($440 billion). The figures are staggering compares with cash holdings of 11% of GDP, or $1.9 trillion, reported in the US firms.

Song & Lee (2012) examine the trend in East Asian firm's cash holdings pre and post the Asian financial crisis. The sample firms are from Malaysia, Singapore, Indonesia, Thailand, the Philippines, Hong Kong, Taiwan, and South Korea. They find that East Asian firms almost doubled their median cash holdings over a decade after the crisis by increasing from 6.7% in 1996 to 12.1% in 2006 as shown in Figure 1.2. According to Bates & Kahle (2009), amortisation of a significant portion of these firms' liabilities will be possible given such substantial amount. Firms in Asian region continue to build up cash holdings over the sample period despite the recovery in stock market indexes and gross domestic products (GDP) by the early 2000s, (Song & Lee, 2012).

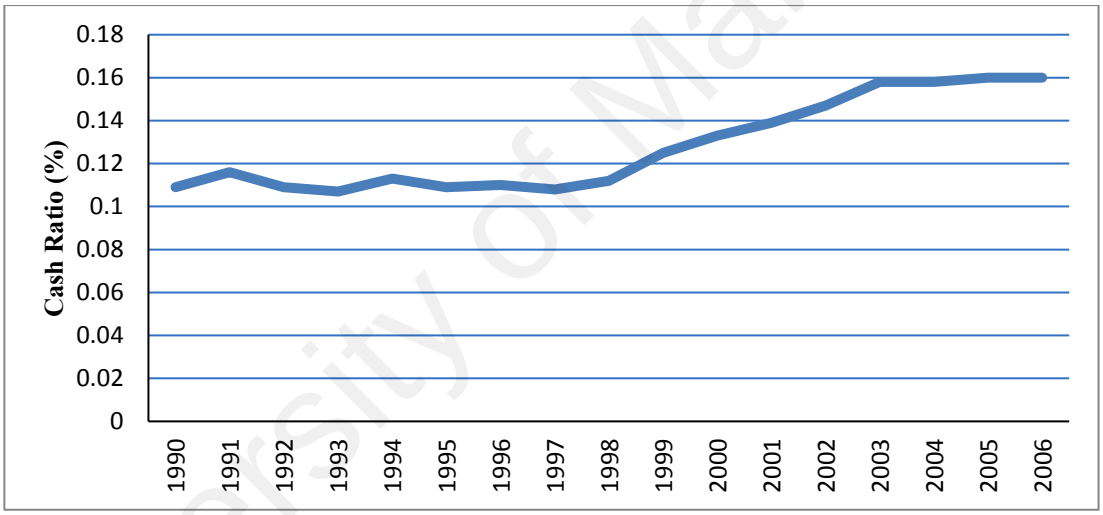


Figure 1.2 Average cash ratios among East Asian firms (1990 to 2006)

Likewise, cash also represents a substantial portion of corporate assets in the Association of Southeast Asian Nations (ASEAN) region. As reported by Lee & Lee (2009), ASEAN firms increased their average cash holding from 8% in 1996 to 12% in 2005. The top 100 ASEAN companies by market capitalisation had combined cash holdings of $228 billion and combined assets of nearly $3 trillion in 2014.

1.1.2 Hospitality firms

It is evident that companies choose to hold more cash across industries in recent years. However, unlike other sectors, the restaurant industry has not shown a similar upsurge in cash holdings over the same period despite the observed increase cash holding levels as mentioned in Section 1.1. Nonetheless, the hospitality industry is one of the industries which have lower reserves of cash holdings including ASEAN. Table 1.1 reports the average cash ratio among the hospitality firms in ASEAN-5. Even though the unusual trend of holding a low level of cash reserves in the hospitality industry is observed, there is only handful of researches done.

Table 1.1: Cash Ratio Mean among hospitality firms in ASEAN-5

Year	ASEAN-5	Malaysia	Singapore	Thailand	Indonesia	Philippines
2001	0.0996	0.0544	0.153	0.0436	0.0529	0.146
2002	0.114	0.0541	0.179	0.0700	0.105	0.125
2003	0.129	0.0628	0.185	0.0921	0.0991	0.176
2004	0.126	0.0919	0.164	0.0789	0.0909	0.183
2005	0.124	0.0701	0.174	0.0871	0.0587	0.202
2006	0.120	0.0684	0.169	0.0839	0.0623	0.182
2007	0.130	0.106	0.195	0.0934	0.0713	0.0740
2008	0.138	0.114	0.176	0.0778	0.0995	0.200
2009	0.139	0.103	0.196	0.0609	0.0973	0.218
2010	0.151	0.101	0.208	0.0739	0.129	0.211
2011	0.140	0.0951	0.203	0.0506	0.138	0.139
2012	0.153	0.109	0.208	0.0584	0.127	0.247
2013	0.142	0.0995	0.195	0.0628	0.149	0.138
Average	**0.133**	**0.0881**	**0.187**	**0.0724**	**0.105**	**0.174**

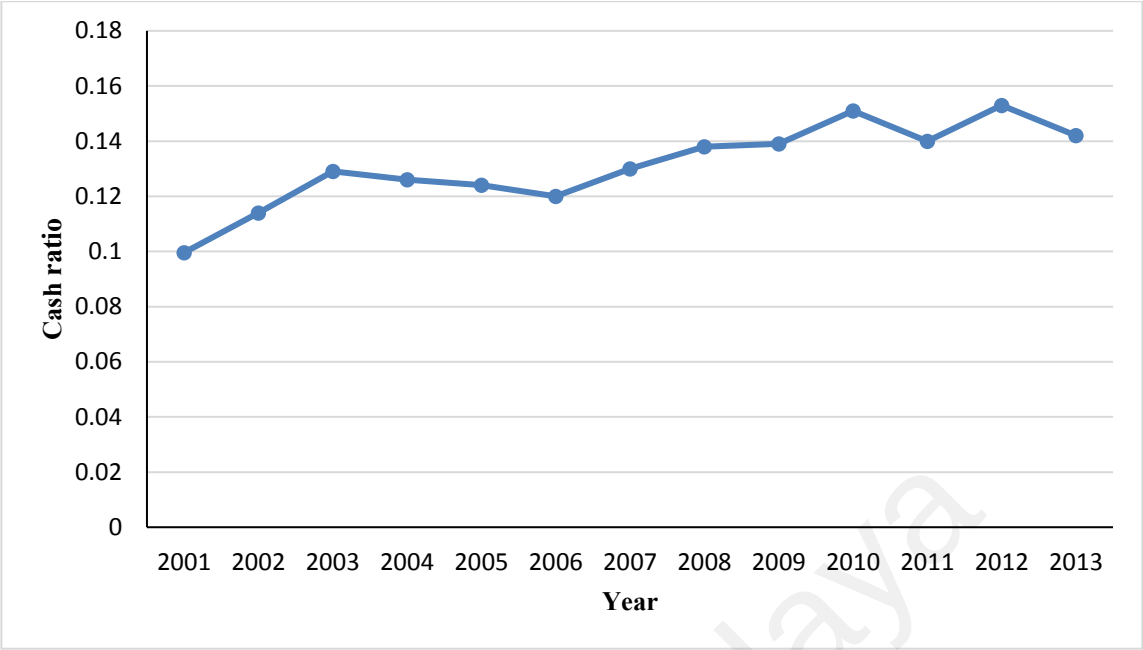


Figure 1.3: Cash Holdings among hospitality firms in ASEAN-5 (Year 2001 to 2013)

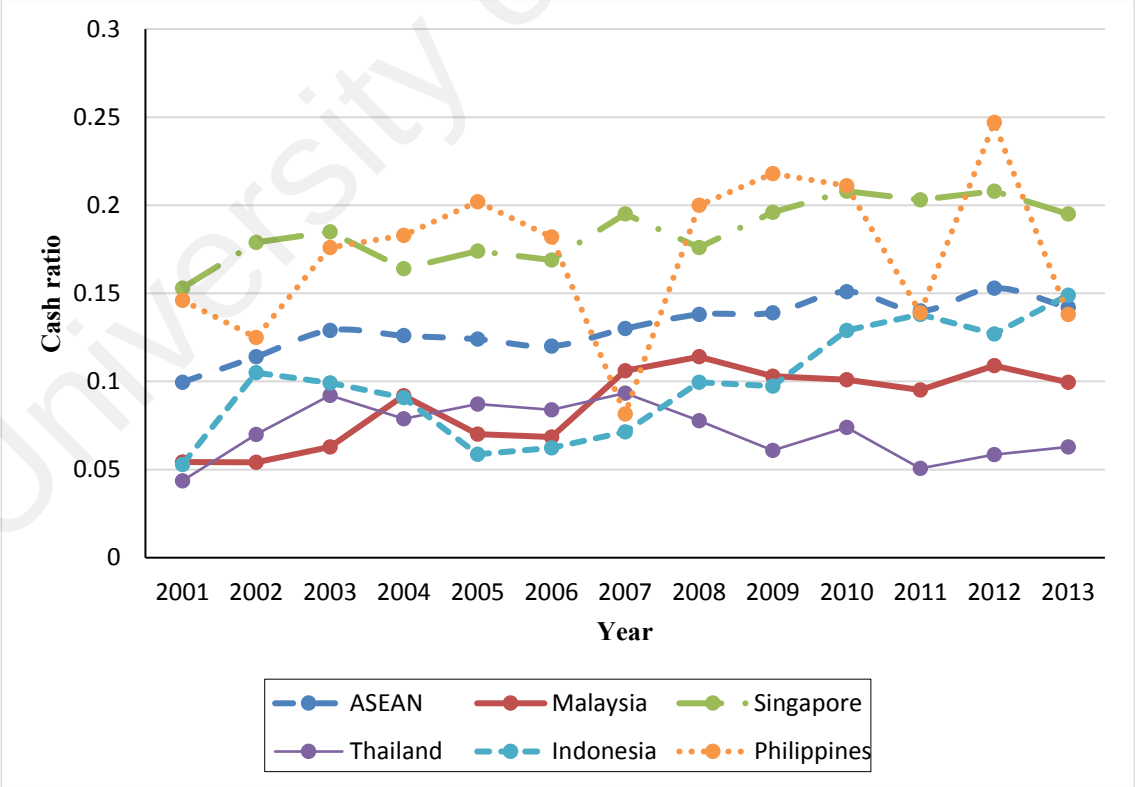


Figure 1.4: Cash Holdings among hospitality firms in ASEAN-5 by country (Year 2001 to 2013)

Among the few is Koh & Jang (2011) which study the determinants of cash holdings in public listed hotel companies in the US. The findings show that hotel firms recorded mean cash levels between 8.6% and 8.8% of assets. In a similar vein, Morais & Silva (2013) study the cash level in lodging firms in South Europe such as Greece, Italy, Spain and Portugal. The average of cash holdings among the hotel firms is below the average of all other industries for the period of 2003 to 2011. Besides, Kusnadi (2005) reports that the hotel firms are among the least in cash reserves on the Singapore Stock Exchange. Based on findings, the cash ratios of hotel firms is significantly lower than the rest of the firms. The cash ratio reported for 230 firms and 11 hotel firms are 23% and 6% respectively. Furthermore, Gao et al. (2013) study the determinants of cash holding policies in private and public US firms. They find that hotel firms only maintain about 6.2% of their total assets.

In addition to lodging firms, Kim et al. (2011) study a sample of 125 public listed restaurants in the US. They reported that the average cash ratio is 0.0839 in the US between 1997 and 2008. Similarly, leisure firms hold a low cash reserve which is about 5% as reported by the Standard & Poor's (2012). Despite the reported unusual trend of cash holdings in the hospitality sector, only a handful of studies had been carried out. The tendency to avoid large cash balances in hospitality industry thus raises important research questions about the unique cash holdings decisions.

1.2 Hospitality Industry

1.2.1 Definition

Before furthering discussion on the hospitality industry, it is crucial to define what hospitality industry is. The hospitality industry is often confused with the tourism industry. According to Pizam (2009), the tourism and hospitality industries are often confused to be identical. However, each of the sectors is unique thus the term should not be used interchangeably. Tourism is made up of various goods and services that are produced by hospitality firms. These hospitality businesses provide goods and services to non-tourists (residents and non-tourist travellers) as well. Moreover, indeed in some communities where tourists do not visit, the hospitality industry provides goods and services only to locals. Not every hospitality businesses involved tourists, such as clubs, institutional food services and assisted living facilities (ALF) (Pizam, 2009). Although not identical, tourism and hospitality industry are closely linked and complement each other, as shown in Figure 1.5. Moreover, as was the case with the relationship between the travel and tourism industries, the hospitality and tourism industries overlap in numerous ways.

Although there is no standard definition for the hospitality industry classification, however majority of the authors are in support with the view in Pizam (2009). Most hospitality literature usually classifies hospitality industry into two broad categories, which are: a) accommodations; and b) food and beverages. (Guillet and Mattila, 2010; Langvinienė and Daunoravičiūtė, 2015).

The hospitality industry is defined as “an industry that is made up of businesses that provide accommodation, food and beverage and meetings to tourists, travellers and residents.” (Pizam, 2009). It is also defined as, “businesses such as hotels, bars, and restaurants that offer people food, drink, or a place to sleep” by Cambridge Business

English Dictionary[1]. This study defines the term "hospitality industry" as hotel and, food & beverage firms.

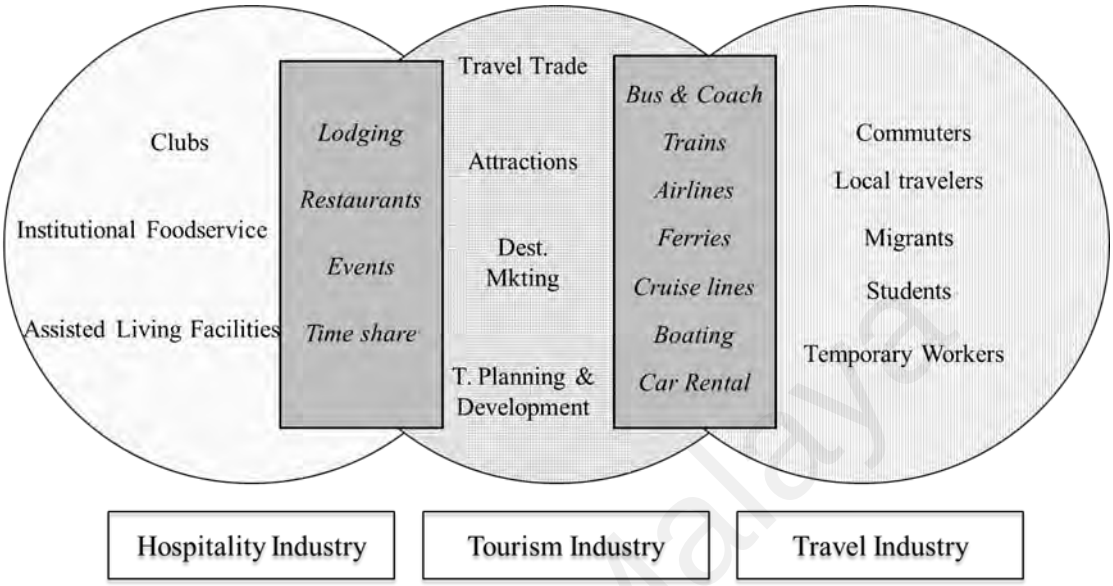


Figure 1.5: The relationship between the travel, tourism and hospitality industries (Pizam, 2009, pp.183)

[1] http://dictionary.cambridge.org/dictionary/english/hospitality-industry

1.2.2 Unique characteristics of hospitality firms

Several attributes of hospitality firms may explain the puzzle of unusual cash holding phenomenon. Past studies show that hospitality firms differ with other firms regarding investment and financing policies (Oak and Iyengar, 2009). The unique corporate governance structures and agency problems in hospitality firms may contribute to such behaviour.

Hospitality firms such as restaurants had been characterised as a business that experiences cyclical patterns and strong seasonality (Choi et al., 2007; Upneja and Dalbor, 1986). They operate in a highly competitive and saturated market in which financial and operational risks are high (Kim et al., 2011). Furthemore, Pizam & Shani (2009) compare hospitality firms with manufacturing companies regarding labour and capital intensity. They argue that hospitality firms are labour-intensive compared to other firms such as manufacturing.

Hospitality firms tend to invest significantly in real estate and fixed assets which are highly illiquid as compared to firms in other industries (Bharwani and Mathews, 2012). Thus, hospitality firms are susceptible to volatile macroeconomic factors and financial environment. Firms may face challenges in dealing with the changes efficiently. Moreover, hospitality firms are also subject to interest rate risk as companies have high debts (Jang, Tang, & Chen, 2008).

Since debt financing in the hospitality industry is higher than in other sectors (Dalbor, 2002), lenders may feel obliged to engage in more monitoring. According to Agrawal & Chadha (2005), it is thus possible that the hospitality industry has better control mechanisms for agency problems than other industries. However, Oak & Iyengar (2009) conclude otherwise. Based on their study on the differences between corporate governance mechanisms among hospitality firms and non-hospitality firms, their findings

show that hospitality firms are prone to agency problems. Hospitality firms have poor governance mechanisms in place. However, compared to their counterpart, hospitality firms achieve better financial performance than non-hospitality firms. Furthermore, the deviation remains a puzzle to date. Therefore, it would be interesting to understand the determinants of cash holdings in the hospitality industry and its unique cash policies.

Besides, hospitality firms are exposed to seasonality and high volatility in operational cash flows (Hsu & Jang, 2008; Pegg, Patterson, & Gariddo, 2012; D. Scott & McBoyle, 2007). Financially constrained firms may leave with no options, but to use the external financing to fulfil operational and investment needs due to the variability of internal cash flows. In some cases, firms may have to give up opportunities due to high cost of capital. Therefore, cash management is essential for hospitality firms during good times and even more so during uncertain economic conditions.

Myers (1977) posits that maintaining high liquidity may alleviate the burden resulted from financial shocks. Such situation is especially relevant to firms which possess a large proportion of intangible assets. Firms as such experience higher financial distress costs thus there is a need to invest sufficient liquidity to minimise this potential distress. Chathoth & Olsen (2007) and Lakonishok, Shleifer, Vishny, Hart, & Perry (1992) support the viewpoint of Myers (1977) that firms like hospitality firms should maintain more liquid assets to deal with the potentially adverse impact.

Therefore, cash management is paramount to the operational success of businesses, especially those in the hospitality industry. However, research to understand why certain sectors such as hospitality industry have consistently low levels of cash is scant.

1.3 Challenges in Hospitality Industry

The hospitality industry is highly sensitive to external factors that could put firms' performance at stake (Bharwani and Mathews, 2012). Business in the hospitality industry is cyclical and seasonality in nature. The industry has a high degree of sensitivity to any shifts in the economic conditions. The relationship between occupancy rates and business downturn are expected to be positively correlated. Furthermore, 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).

1.3.1 Financial risks

The hospitality industry is exposed to various financial risks. Some of the key risks faced by the hospitality industry include illiquidity of fixed assets such as real estate; interest and cost of financing; regulatory compliance; legal risks, credit/default risk, and foreign exchange risk (Bharwani & Mathews, 2012).

Given the significant amount of investments in illiquid fixed assets, there is a high likelihood that hospitality firms are unable to respond to changing macroeconomic environment efficiently and timely. Furthermore, hospitality firms like hotels are also exposed to liquidity risk as the possessed assets are not easily converted into a spendable form in times of need. Thus, liquidity management is vital for hospitality firms' survival.

As discussed, hospitality firms are asset-intensive in nature. The main source of financing is obtained largely via an external channel such as capital markets. Besides, hospitality firms are highly leveraged. Therefore, firms face challenges that they might

not fulfil their financial obligations when payments and interests as they come due resulted from insufficient liquid assets.

Besides, hospitality firms face challenges in coping with governmental policies and regulatory changes which may adversely impact business operations. A wide array of regulatory agencies monitors the compliance of businesses in the food and beverage industry. The operation of hospitality firms is strictly governed by regulations such as handling of food and beverage, hygiene standards and licenses. Hospitality firms are thus subject to legal penalties in the event of non-compliant (Bharwani & Mathews, 2012).

Besides, hospitality firms are also subject to default or credit risks due to substantial credit transactions in their daily business operation. Credit offer to corporate and individual clients are common among hospitality firms thus there is a risk of customers defaulting their payment. Furthermore, hospitality firms are exposed to foreign exchange risk as the businesses operated worldwide and transacted in various currencies.

1.3.2 Tourism crisis

Besides financial risks, hospitality firms are particularly vulnerable to economic conditions (Deloitte, 2017). The hospitality industry is exposed to a broad range of macro-environmental factors extraneous to an organisation such as disease outbreaks, terrorism, natural disasters, political instability, and economic downturn. Such events result in a significant adverse effect towards the performance of hospitality firms. The impact is largely beyond the control of the organisation (Chen, Jang, & Kim, 2007; M.-H. Chen, Kim, & Kim, 2005; Mat Som, Ooi, & Hooy, 2014; McAleer, Huang, Kuo, Chen, & Chang, 2010; H. Song, Lin, Witt, & Zhang, 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, Jang, & Kim, 2007; Kuo, Chen, Tseng, Ju, & Huang, 2008; McKercher & Chon, 2004).

Similar to other businesses, hospitality firms are also exposed to political and regulatory risk. In certain cases, the above 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.

1.4 Problem Statement

As discussed in Section 1.1, many public firms report substantial and growing levels of cash on their balance sheets in recent years, making it increasingly important to understand the implications of cash holdings for future fundamental performance and stock returns. However, the upward trend in corporate cash holdings is not pervasive across all industries. Although studies had been conducted in different contexts in the past, studies targeting cash-holding determinants in the hospitality industry are scarce. Some of the past studies include: industrial firms (Bates and Kahle, 2009; Kim et al., 1998; Opler and Pinkowitz, 2001); insurance (Hsu et al., 2015); high tech firms (Booth and Zhou, 2013; Chen, 2008); REITs (Hardin et al., 2009); and, inter-industries (Opler et al., 1999; Ozkan and Ozkan, 2004). As highlighted in section 1.2, the hospitality industry has unique structural characteristics. However, the impact of the distinct features of hospitality firms and non-hospitality firms are little known. Thus, there is a need to further study in the context of the hospitality industry.

Rare prior investigations shed light on the hospitality industry. The performance of the hospitality industry has been adversely impacted by a broad array of volatility, as described in Section 1.2. Thus, it raises concern about the sustainability of hospitality firms. There is a need for relevant authorities and policymakers to study the issue of sustainability of hospitality industry. Furthermore, reinforcing internal strength by each firm is vital for survival in a highly competitive environment in the long run.

Apart from external shocks and tourism crisis, hospitality firms need to ensure their capability to respond promptly to also faces challenges arises from financial risks as well (Section 1.3.1). Hospitality organisations have substantial investments in illiquid assets such as real estate and immovable assets. Thus, optimal allocation of cash as a buffer against future uncertainty is an essential decision a firm need to make (Ramírez and

Tadesse, 2009). According to Bharwani & Mathews (2012), maintaining sufficient internal cash flows are vital for business resilience for hospitality firms.

In addition, the responsibility and supervisory role of the board of directors in hospitality firms should be emphasised. The board of directors are responsible to ensure that the strategies developed by the managers are well-aligned with the constantly changing environment. Besides, they need to make sure that the constructed strategies lead the firms to achieve better firm performance. According to Agency Theory, conflict of interest between shareholders and managers result from the separation of these two parties. The principal-agent relationship often associated with agency problem where managers' interest contradicts with the interests of shareholders. Therefore, corporate governance plays a major role in bridging the relationship gap. Corporate governance mechanism helps to govern and monitor the managers' conducts to ensure optimal firm performance.

The supervisory role of the board of directors is relative more pronounced in hospitality firms especially in time of uncertainty in hospitality industry, (Ooi, Hooy, & Mat Som, 2015). Hospitality firms are required to revise and formulate strategies frequently to cope with rapid change in its external environments. Competent board of directors are therefore imperative to provide a better quality of strategic planning and implementation for the firm to stay relevant and competitive in the market.

Despite the proliferation of research on cash holdings, the effects of external factors on corporate cash policy are little known. There are only a handful of studies have examined the relationship between issues related to institutional factors and cash holdings to date. More studies have examined the effects of internal, as opposed to external factors on firms' cash holdings behaviours. External factors, such as institutional environment have mostly been neglected in the extant literature, despite the fact that institutional

factors have a direct effect on firms' behaviours and strategic choices (Peng, 2003; Peng et al., 2008).

1.5 Research Questions

Several problems were identified in Section 1.4, but only a limited number of studies were carried out to address these issues especially in the context of the hospitality industry to date. The lack of evidence thus served as the underpinning for the research effort discussed herein. The primary research questions of this study are:

1. What are the determinants of cash holdings for hospitality firms in an emerging market?
2. To what extent corporate governance attributes affect cash holdings and firm performance in hospitality firms during a crisis?
3. How do country-level governance impact on corporate cash holdings among public listed hospitality firms in ASEAN-5?

1.6 Research Objectives

Referring to the primary research questions as addressed above, the primary objective of the study is to investigate the relationship of governance and cash holdings and its impact on hospitality firm performance. Three main objectives have been formulated and listed in the following:

1. To investigate the determinants of cash holdings for hospitality firms in an emerging market.
2. To examine to what extent corporate governance attributes affect cash holdings and firm performance in hospitality firms during a crisis.
3. To study how country-level governance impact on corporate cash holdings among public listed hospitality firms in ASEAN-5.

1.7 Significance of the Study

This research hypothesised that board independence, separation of CEO and board chair and managerial ownership were positively associated with cash holdings of hospitality firms. While previous studies have conducted related research, this study examined this relationship in the hospitality industry. This study contributes directly to the literature and body of knowledge on hospitality governance. It also enriches the knowledge of governance from the perspective of the hospitality industry.

This study contributes to the literature in several ways. Firstly, as far as it could be ascertained, this study is among the first to study comprehensively on corporate governance and corporate cash holdings for listed hospitality firms. The existing cash literature emphasizes mainly on developed markets; however, several recent studies focus on emerging markets. This research also contributes to the corporate governance literature by studying the association between corporate governance and cash holdings and its impact on firm performance. Although research has been undertaken to examine similar association, there is a gap in the literature where a study in the hospitality industry is scarce.

Secondly, this study identifies the corporate cash holdings determinants specifically for public listed hospitality firms in ASEAN-5. It extends prior studies by providing valuable empirical evidence regarding how firm‘s size, profitability, leverage, operational complexity, earnings quality and audit factors affect the decision to hold cash. Also, the role of the board of directors, especially from the board capital perspective influence firm performance, remains under-researched. Thus, this study intends to bridge the gap by investigating the importance of the board of directors as an internal governance mechanism. In addition, country-level governance factors were also examined to provide a better insight on determinants of cash holdings.

Thirdly, this study shed light on the potential use of cash as a buffer against uncertainty during the crisis. Although studies on cash holdings are not new, however, previous studies rarely look at the impact of cash during a crisis. Crisis management and tourism are gaining growing interest as an industry practice and subject of academic enquiry. South East Asia has been affected by some severe crises in recent years. However, response strategies can be deficient, and firms are unprepared. Tourism in ASEAN is vulnerable to regional and global events. Such tourism crises trigger a response in which various strategies are employed.

1.8 Thesis Structure

The remainder of this chapter is organised as follows. An overview of ASEAN-5 is presented in Chapter 2 followed by detailed literature on corporate cash holding (Chapter 3), corporate governance and its implication on firm performance. Identification of research gap and a theoretical framework was designed. Chapter 4 discusses the methodology adopted in this study. The subsequent three chapters present the research articles which were aligned to answer the research questions as formulated in Section 1.5. Chapter 5 presents the study on determinants of corporate cash holdings while Chapter 6 investigates the relationship between corporate governance and cash holdings. Chapter 7 then relate the role of country-level governance and its impacts on corporate cash holdings in hospitality firms in ASEAN-5 countries. Chapter 8 then summarised all the previous chapters and discussed this study's implication and limitations and offers suggestions for future research.

CHAPTER 2: OVERVIEW OF ASEAN-5

2.1 Introduction

Association of Southeast Asian Nation or in short ASEAN consists of 10 countries member. Five foreign ministers representing five countries Malaysia, Singapore, the Philippines, Thailand and Indonesia on 8 August 1967 signed and witnessed the Bangkok Declaration in Thailand. The association is later joined by neighbouring countries such as Brunei in 1984, Vietnam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999. ASEAN is ranked third as one of the largest regional economic trade union after the North American Free Trade Agreement (NAFTA) and the European Union (UN). The population in the region totalled to about 640 million in year 2017. The main contributors of the total gross domestic product (GDP) are from the five founding members which are Malaysia, Thailand, Singapore and the Philippines. ASEAN-5 alone contributed approximately 90% of the total GDP (ASEAN Exchanges, 2012).

2.2 Economic outlook

The ASEAN-5 economy has demonstrated remarkable performance with its steady growth over the last decade. The region exhibits consistent positive annual increment in GDP. As displayed in Figure 2.1, the continuous expansion of the economic activity can be observed from the period 1997 to 2015 in ASEAN-5. However, there was a drastic drop in the percentage change during the 1998 Asian financial crisis. However, the ASEAN-5 quickly recovered after 1998. The positive change prevails even during the world economic downturn in 2008 and 2009 (including the developing economies and Asia); differing from many mature economies that record negative changes in GDP during 2008 and 2010.

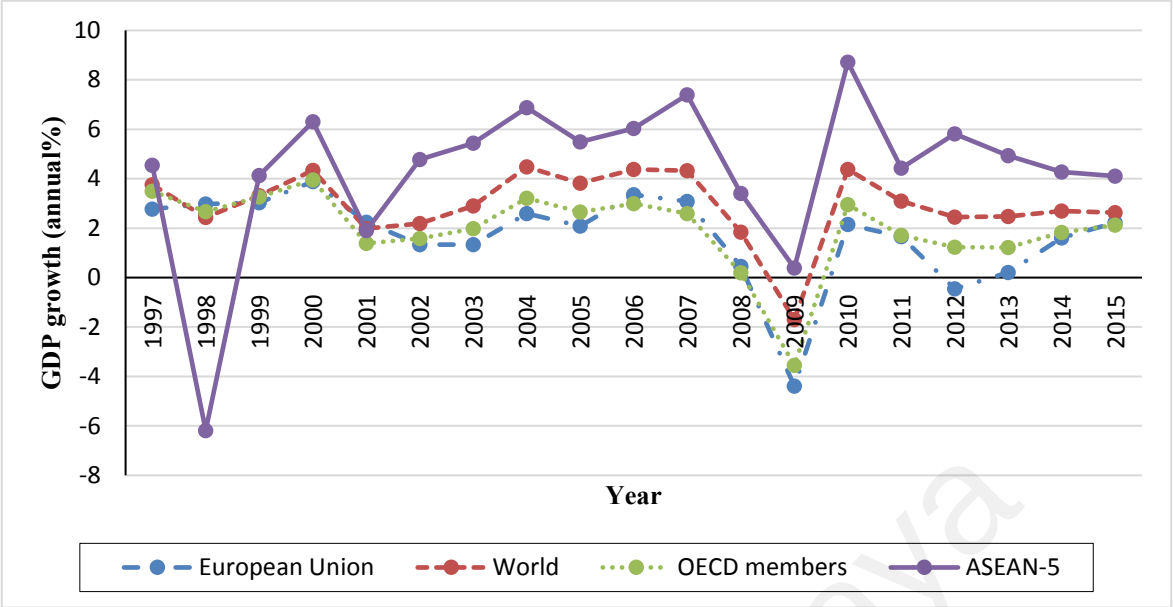


Figure 2.1 GDP growth (annual %) in the World (Year 1997 to 2015)[2]

2.3 Tourism and hospitality development

Tourism is a dynamic economic sector and has grown steadily since the 1950s. The initial growth is primarily observed in Europen and North American region. However, in recent years, countries in Asia experienced tremendous growth in not only economic but also disposable incomes (Breiling, 2016). In the year 2014, tourism industry contributes US$7 trillion (about 9% of GDP) to the global economy (UNWTO 2015). Table 2.1 summarises the growth rate of international tourist arrivals in various region.

[2] Source: Worldbank (http://databank.worldbank.org)

Table 2.1: International Tourist Arrivals (in millions) and Growth Rate (%) from the year 1990 to 2014[3]

	1990	1995	2000	2005	2010	2014
Europe	261.5	304.1 (14%)	385.6 (21.1%)	439.4 (12.2%)	476.6 (7.8%)	582
Asia and the pacific	55.8	82 (32%)	110.1 (25.5%)	153.6 (28.3%)	203.8 (24.6%)	263
Americas	92.8	109 (14.9%)	128.2 (15%)	133.3 (3.8%)	149.8 (11%)	181
Africa	14.8	18.9 (21.7%)	26.5 (28.7%)	35.4 (25.1%)	49.5 (28.5%)	56
Middle East	9.6	13.7 (29.9%)	24.1 (43.2%)	36.3 (33.6%)	60.3 (39.8%)	51

There is a growing importance in tourism development in the region. ASEAN tourism is forecast to continue to grow (Wong et al., 2010). The ASEAN-5 countries are identified as active zones for tourism development. The countries are also known for their rich heritage, cultural diversity, tropical tourism and low-cost destinations (Conrady and Buck, 2010). The tourist arrival amounted to 65.5 million visitors in the year 2008, which almost doubled the figure in the year 2002 (33 million) (ASEAN, 2009a; UNWTO, 2003). According to UNWTO, the South-east Asian region is expected to experience further increase in tourist arrival growth, where its average annual growth rate could reach up to 136 million per annum by the year 2020 (UNWTO, 2000). The illustrates the growing importance of tourism and the interdependence among countries in the ASEAN region.

According to the World Travel and Tourism Council (WTTC), contributions from ASEAN's travel and tourism sector surged by close to 40% from US$207 billion in 2010 to US$279 billion in 2014, resulted from the strong growth in tourist arrivals in the region

[3] Source: World Tourism Organization (UNWTO)

(DBS, 2016). Data compiled by the ASEAN Tourism Statistics Database shows that international tourist arrivals for the region grew at 9.3% CAGR over the period, from 73.8 million visitors in 2010 to 105.1 million in 2014 (DBS, 2016).

2.4 Corporate governance reform in ASEAN

Corporate governance in ASEAN has taken centre-stage in the wake of 1997 Asian Financial Crisis. Previous literature such as Mitton (2002) and Johnson, Boone, Breach, & Friedman (2000) argue that that one of the leading cause of the crisis is due to weak corporate governance in Asia. As the importance of corporate governance gained more attention in the financial market, this has led the government and industry in Asia to strive for corporate governance reforms. Corporate governance systems of many economies in Asia not only experienced a structural change in a financial institution but also strengthening of the regulation[4] following the reformation.

Corporate governance is related to the agency problem regarding the separation of ownership (La Porta et al., 1997). The underlying question of corporate governance is how to assure investors that they will get a fair return on their financial investment. Agency problems exist between shareholders and managers (the Anglo-Saxon market-based model), but also between controlling shareholder and minority shareholders (the relationship model). If the controlling shareholder is a family, typical in most Thai and Malaysian financial corporations, the standard principal-agent approach can be considered to constitute the third type of corporate governance model called the "family based corporate governance model" (FBS).

[444] For details on legal & regulatory bodies, and responsibilities of board in ASEAN-5, please refer to Appendix A vely.

In ASEAN, it is prevalent that family-controlled firms that are not necessarily controlled by the equity markets or financial institutions. However, they do operate a financial entity within the context of a relationship-based system which could be considered the family-based corporate governance system (Belghitar and Khan, 2011).

Corporate governance has gained more attention in ASEAN markets resulted from globalisation, increased merger activity among large corporations, and privatisation of state-owned enterprises. Table 2.2 shows an overview of the corporate governance of ten Asian countries between the year 2010 to 2014 provided by the Asian Corporate Governance Association and published in Hay Group report in the year 2015. Corporate governance watch market scores are constructed based on corporate governance rules and practice, enforcement and other macro factors. Singapore ranks number one among the ten countries in 2014; Thailand and Malaysia rank No. 4 with steady improvement; While Indonesia and Philippines have been ranked the lowest among the ten countries. Table 2.3 presents a summary of the market category scores for ASEAN-5.

Table 2.2: Corporate Governance Watch market scores (%): 2010 to 2014[5]

Ranking	Country	2010	2012	2014	Change (2012 vs. 2014)
1	Hong Kong	65	66	65	-1
1	Singapore	67	69	64	-5
3	Japan	57	55	60	+5
4	Thailand	55	58	58	-
4	Malaysia	52	55	58	+3
6	Taiwan	55	53	56	+3
7	India	48	51	54	3
8	Korea	45	49	49	-
9	China	49	45	45	-
10	Indonesia	40	37	39	+2
10	Philippines	37	41	40	-1

Table 2.3: Market category scores: CG Watch 2014

	Total	CG Rules & Practices	Enforcement	Political & Regulatory	IGAAP	CG Culture
Malaysia	58	55	47	59	85	43
Singapore	64	63	56	64	85	54
Thailand	58	62	51	48	80	50
Indonesia	39	34	24	44	62	32
Philippines	40	40	18	42	65	33

Source: Asian Corporate Governance Association

[5] Source: Asian Corporate Governance Association
http://www.acga-asia.org/public/files/CG_Watch_2014_Key_Charts_Extract.pdf

2.5 Why ASEAN-5?

Although ASEAN has ten country members currently, this thesis is emphasizing on the ASEAN-5 countries, which comprises Malaysia, Indonesia, Singapore, Thailand and, the Philippines. There are several reasons why ASEAN-5 is worth studying. First, the study concentrates on the five founding members of the ASEAN as these countries have better established regulatory and accounting institutions that lend themselves to further study. Brunei, Burma, Laos and Vietnam which are the countries that were admitted to the ASEAN after establishment by the founding 5 members, have yet to develop solid capital markets' regulatory and institutional frameworks (Saudagaran and Diga, 2000). Second, only five ASEAN founding members had a complete set of results for the study period and therefore precluded the addition of distant countries to this study. Since the association started with the integration mutually as a block 40 years ago, the study may, therefore, provide a valid comparative result, meeting a need for more empirical research in ASEAN studies in particular and the Asian market in general.

Third, corporations in these countries have similar characteristics, such as high concentration of family ownership, often belonging to a business group with a pyramidal structure and cross-ownership, low corporate transparency, extensive and diversified business structures, and risky financial strategies (Claessens, Djankov, & Xu, 2000; Stijn Claessens, Simeon, Fan, & Lang, 2002). As family ownership is widespread, with family members often sitting in the top management team, the key agency relationship in our sample involves the controlling owner and minority shareholders rather than managers' vis-a`-vis outside shareholders (Claessens et al., 2000)

Fourth, because these countries are integrated into the international trading bodies, such as the Asia–Pacific Economic Cooperation forum (APEC), the World Trade Organization, they share a common economic reform path. However, they also reflect differing levels of development and financial reform (Chan et al., 2015). All Asian economies adopt OECD Principles of Corporate Governanc. The outputs of the Asian Roundtable are used as a guideline in development of listing rules, regulations and corporate governance codes (OECD, 2014). Thus, they provide a natural laboratory for a comparative analysis linking corporate governance and cash holdings.

Fifth, given that the ASEAN-5 countries play a significant role in tourism development, an unfavourable effect on the global tourism industry would, in turn, affect these countries negatively (Bhati et al., 2016). The occurrence of tourism crisis is one such factor which affects the tourism industry adversely. Such events would eventually influence the economic growth of the affected countries. In the past decade, several tourism crises have affected the tourism industry and the development of travel and tourism in the ASEAN-5 countries. However, there are limited of research done on the effects of disasters on the ASEAN-5 countries and the effectiveness of the measures taken to rehabilitate the hospitality industry.

Last but not least, these countries provide different institutional settings to study. For example, the capital market for developed economies such as Singapore is liberalised, and the shareholder and creditor protection rights are high in its stock market. The governance mechanism thus has an effect on the accessibility of external funds and financial decisions (Young et al., 2008). The impact of the rule of law observed varies among countries. The rule of law index shows that Singapore and Malaysia achieved higher scores compared to the Philippines, which are significantly below these levels (Kaufmann et al., 2011; Kusnadi, 2011). Since the majority of the countries in ASEAN

consists of a mainly emerging market, the institutional theory has become the prevailing in business management analysis especially in emerging economies (Hoskisson et al., 2000; Wright et al., 2005). Particularly in the emerging markets, the cost of agency contract enforcement is costly due to the institutional context (North, 1990; Wright et al., 2005).

According to Morck, Wolfenzon, & Yeung (2005), the conflicts of interest between controlling and minority shareholders which are resulted from concentrated ownership become more prevalent with no effective external governance mechanisms in place While much academic literature has looked into corporate cash holdings in other emerging markets, studies examining cash holdings decision in the ASEAN region has been scant especially the study on the impact of internal and external governance. Therefore, it would be interesting to focus on ASEAN-5 countries.

2.6 Summary

Section 2 presents an overview of ASEAN-5. The economic outlook, the tourism and hospitality development, and corporate governance reformation in the region is discussed. In summary, study focussing on ASEAN-5 is interesting due to its distinct characteristics such as high concentration of family ownership, low corporate transparency, which are not as common in the developed nations.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter critically reviews past theoretical and empirical studies on corporate cash holdings and corporate governance. As discussed in Section 1.1, cash balances in firms are slowly rising, and this has prompted researchers to revisit the motives for holding cash and examine the determinants of cash holdings decision in firms. The literature discussed in this section reviews cash holdings theories and its determinants from mainstream theoretical perspectives. The last section will link cash holdings to corporate governance and its impact on firm's performance, as well as review past literature that has attempted to study this link. Research gaps are then identified and discussed.

3.2 Cash Holdings

3.2.1 Importance of corporate cash holdings

Cash holdings are strategically important and have always played a crucial role in a firm's financial policy (Campello et al., 2011; Harford, 1999). In almost all business settings, cash is not the sole essential element to the success of a business but also crucial for business survival (Defranco and Schmidgall, 1998). Managing corporate liquidity is considered as one of the top priorities when it comes to firm's asset management (Kallberg & Parkinson, 1992 as cited in Chathoth & Olsen, 2007). According to Kim, Mauer, & Sherman (1998), maintaining a high level of liquid assets are preferred. As cash cannot be raised instantaneously, firms need to keep sufficient cash to support the operations of the firm (Dittmar and Mahrt-Smith, 2007). Since businesses do not always have immediate access to income, it is convenient to have some liquid assets at disposal to pay bills. Cash holdings allow the firm to avoid transaction costs when accessing external markets (Kim et al., 1998; Smith, 1986). However, managers have to weigh the costs and benefits about the trade-off between investments in liquid assets deliberately before resource allocation decisions.

A firm's degree of cash holdings has both beneficial and detrimental effects on firm value. The uses, benefits and risks of cash holdings in companies have been well studied in literature (Al-Najjar, 2013; Bigelli and Sánchez-Vidal, 2012; Han and Qiu, 2007; Kim et al., 2011; Kusnadi and Wei, 2011; Lins et al., 2010; Opler et al., 1999; Palazzo, 2012; Ramírez and Tadesse, 2009). Keynes (1936) highlighted two main advantages of cash holdings. Firstly, firms may cut down transaction costs by opting cash payments without assets liquidation (Han & Qiu, (2007). Cash is an essential part of a firm's assets where it provides liquidity to firms. Furthermore, it is critically affecting the organisation's ability to hedge risk, build firm value and survive downturns (Ferreira and Vilela, 2004; Fresard, 2010; Lins et al., 2010). Firms hold cash to meet financial obligations, to ensure smooth operations, and allow a firm to take up positive net present value projects promptly. Sufficient cash also enables firms to undergo projects without having to raise costly external funds. Besides, cash flow uncertainty and financial distress costs can be significantly reduced through sufficient liquidity (Opler and Titman, 1994).

Secondly, a firm hold cash for precautionary motive. Cash may be used as a hedging tool against the future cash shortfalls exposure (Han and Qiu, 2007; Kim et al., 2011; Lins et al., 2010; Palazzo, 2012). Besides, cash provides financial flexibility when financial markets are in a state of turmoil (Smith, 2014). Cash serves as a cushion against unexpected shocks and to avoid high capital costs (Opler et al., 1999; Ozkan and Ozkan, 2004). Furthermore, it prevents firms from cutting dividends payment when firms experience a shortage of cash. Therefore, maintaining a significant amount of cash help firms to avoid such circumstances and make cash holdings valuable to shareholders.

However, keeping the improper amount of cash holdings would lead to adverse impacts on businesses. Although cash provides liquidity, it is also the asset which is the least productive and the one generates small or, in general, no financial returns. A

company will not generate any return simply by holding cash instead of either spending it on investment projects or using it to fund operations. The main risk for businesses holding too much cash is that insiders can turn cash into private benefits (Fresard and Salva, 2010). The agency theory states that conflict between managers and investors lies at the heart of corporate cash holding policy (Jensen & Meckling, 1976; Jensen, 1986). In this understanding, managers try to build up cash levels to liberate themselves from the watchful eyes of creditors. Weak governance mechanism further aggravates excessive cash holdings by managers for self-benefits, which may hurt shareholder's value (Dittmar et al., 2003; Jensen, 1986). Therefore, piling up cash beyond a reasonable level could dampen the value of the firm and, hence, its stock (Dittmar and Mahrt-Smith, 2007; Fresard, 2010; Kalcheva and Lins, 2007; Masulis et al., 2009). Thus, the possession of an appropriate level of cash is critical to how investors perceive and evaluate a company.

3.2.2 Roles of cash in hospitality industry

Similarly, cash management is imperative to the hospitality industry. Past studies show that cash holdings are essential to hospitality firms since they operate in a highly competitive market in which financial and operational risks are high (Kao, 2012; Kim et al., 2011). Cash holdings stimulate firm operation expansion and acquisitions (Bates and Kahle, 2009; Hardin et al., 2009), making them relevant to managers especially in the hospitality industry, who are under immense pressure from shareholders to give priority to growth and expansion (Chathoth and Olsen, 2007).

Capital expenditures have been pivotal in prior cash holding a discussion (Bates & Kahle, 2009; Ferreira & Vilela, 2004; Ozkan & Ozkan, 2004). As addressed in Section 1.3.1, hospitality firms face various challenges. Bharwani & Mathews (2012) did an extensive review of risk identification and analysis in the hospitality industry. One of the main challenges faced by hospitality firms which were highlighted in the paper is dealing with asset illiquidity problem. Unlike others, hospitality firms tend to own more fixed assets such as land, buildings, and equipment compared to firms in other industries (Bharwani & Mathews, 2012; Jang & Ryu, 2006). Hospitality may not be able to respond to changing economic, financial and investment environment promptly as a result of high possession in a substantial proportion of illiquid asset. Furthermore, the hospitality firms are highly leveraged. Firms are exposed to high financial risk where there is a possibility of not being able to fulfil their financial obligations. Thus, cash holdings are a key issue for the hospitality industry.

3.3 Cash Holdings Theories

Imperfect capital markets drive firms to hold cash and liquid assets. In a perfect capital market, holding cash would not be relevant. When such condition is assumed, cash can be raised at no cost in the capital market, whenever it is needed. Three prominent theoretical models explain why firms hold liquid assets including cash (Opler and Titman, 1994). The relevant theories include the trade-off theory, pecking order theory, and agency theory. These theories have complemented different views on corporate cash-holding behaviour.

3.3.1 Trade-off theory

Based on the trade-off theory, an ideal liquidity level is decided by balancing the benefits and costs of holding cash. According to (Keynes, 1936), firms may keep cash for the precautionary, transactional, or speculative motives. A precautionary motive may be unexpected contingencies that arise from uncertainty experienced by companies. Next, a transactional motive arises due to business operational needs while a speculative motive might be profitable future investment opportunities (Bates and Kahle, 2009; Dittmar et al., 2003).

On the one hand, corporate cash holdings benefit firms by lowering their dependence on expensive external financing and supporting present investment opportunities (Kim et al., 1998). The advantages of maintaining cash come from two main motives, namely, the precautionary motives and the transaction cost motives. According to Ferreira & Vilela (2004), there are three key advantages of holding cash. First, cash minimises the cost of external funds or the liquidation of existing assets. Second, sufficient cash allows a firm to undertake positive net present value investments. Third, it lowers the probability of financial distress.

However, it must be handled with caution as holding cash and cash equivalents may lead to additional costs. For example, the transaction cost related to fees charged on external financing. In addition, there is carrying cost associated with the lower return earned on cash about other investments with the same risk level (Dittmar et al., 2003). The carrying cost negatively impacts investment opportunities; transactions cost influence firms to hold more cash, particularly because of inability to access external funding and the marginal cost of cash shortfalls (Bates and Kahle, 2009; Faulkender and Wang, 2006; Miller and Orr, 1966). Under trade-off theory, it states that ideal level of cash resulted from balancing marginal costs and marginal benefits of cash holding.

3.3.2 Pecking order theory

Contrary to trade-off theory, there is no optimal cash level based on pecking order theory (Myers & Majluf, 1984) in explaining the determinants of cash (Dittmar et al., 2003). The underlying assumption of pecking order theory is that new equities issuance is costly due to information asymmetry. A firm would normally opt for internal funding before external financing due to deviation in costs. To invest in projects, firms will have to finance the investment primarily using internal funds. Only if the internal funds are exhausted, the firm will raise funds by issuing debt and finally with equities.

This theory postulates that debts and level of cash increase at the same time as the firm has more disposal funds. Based on this theory, the cash level results from financing and investment decisions. In other words, holding a degree of cash is not necessary.

3.3.3 Agency theory

Jensen & Meckling (1976), Jensen (1986), Myers (1977) and Myers & Majluf (1984) explain the theory of corporate cash holdings. The theories discuss how cash holdings behaviour are related to the agency problems and asymmetric information. The fundamental idea of the agency theory is that managers may not act in the best interest of the shareholders due to the separation of ownership. Entrenched managers tend to increase firm's free cash flow for their benefit rather than paying back to shareholders even when there are no good investment options (Hart and Moore, 1998; Stulz, 1990) because cash is the asset that can be freely controlled (Jensen, 1986).

The main reasons why managements hold large cash balances according to agency theory include: Firstly, management's may hoard cash to allow better flexibility in achieving their targets but may not be for the benefit of the shareholders. Secondly, managers tend to reserve more cash due to risk aversion to reduce the possibility of financial distress and to meet unanticipated contingencies that may arise. Thirdly, management may hold cash because they prefer to keep the funds and financial flexibility within the firm.

The issue of excessive cash holdings may result in agency problems due to abuse of power by managers. Therefore, corporate governance is required to mitigate such problem. 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 et al., 1999). The mechanisms include board structures; ownership concentration; and shareholders' rights. The findings support the agency theory that posits that good governance mechanisms reduce abuse of powers by managers and enhance firm value (Dittmar and Mahrt-Smith, 2007).

3.4 Determinants of Cash Holdings

After studying the motives and relevant theories which serve as the main explanation for holding cash, this section shall focus on the question of which specific factors are determining cash holdings decisions. Though there are various literature that have adopted the mentioned theories to test and support its hypothesis, there are newly emerged theoretical and empirical models have been published in recent years. This section describes the main empirical and theoretical contributions to cash holdings literature.

For firms having high growth opportunities, it is imperative that they have enough funds to exploit these opportunities. They do not want to forgo these promising investments, so they ought to hold liquid assets to be sure to have the necessary funds available when investment opportunities arise. Thus, firms with more or better growth opportunities tend to keep higher cash balances to prevent losing valuable investment opportunities due to a shortage of funds. Also, these cash balances are more highly valued by investors, in anticipation of future growth (Opler et al., 1999).

Growth opportunities are also linked to the costs of agency costs resulted from the conflicts of interest between shareholders and debtholders. With higher growth opportunities, firms are expected to engage in more project and investment opportunities. Firms will have to find means to finance the given opportunities. However, external financing is costly in the presence of higher expected agency costs. Thus, higher cash levels are needed especially when the cost of external financing from outside sources is expensive due to asymmetric information. Based on the discussion, it is expected that the relationship between cash-holding and growth opportunities is positive.

Previous studies in cash holding highlighted the vital role of firm size. Transaction cost models demonstrate that the economies of scale exist in cash management (Baumol, 1952). Larger firms have better access to financial markets in general. However, smaller

firms not only face higher constraints in borrowing but also prone to financial distress because of severe information asymmetries (Fazzari et al., 1988; Kim et al., 1998). Therefore, smaller firms are expected to hold more cash due to costly external financing. However, larger firms are considered to be more diversified. The managers in large firms thus have better flexibility in financial policies and less prone to bankruptcy (Al-Najjar, 2011). In turn, the cash levels are higher in such firms.

Ozkan and Ozkan (2004) argue that size of a firm may serve as a proxy for information asymmetry. Lesser information asymmetries provide easier access to financing. It also allows greater diversification of activities for bigger companies. Hence, cash holdings are expected to be small for bigger firms. Several studies confirmed a negative effect of firm size on cash holdings, measuring firm size both using assets (Gao et al., 2013; Opler et al., 1999). Accordingly, the relationship between cash holdings and firm size are expected to be negative. Company size (SIZE) is measured by the natural logarithm of total assets.

Kim et al. (1998) postulate that cash flows serve as a replacement for cash. Based on this perspective, firms with higher cash flows tend to maintain lesser cash. The need to hold high levels of cash reduced if a firm has sufficient cash flow. Having cash flow provides a ready source of liquidity (Ferreira and Vilela, 2004; Kim et al., 1998). A negative relationship is predicted between the cash flow and level of cash holdings of a firm based on the Trade-off theory. On the other hand, we expect a positive relationship based on the pecking order theory. Firms with higher cash flow are more likely to hold most of their assets in the form of cash (Ferreira and Vilela, 2004). Firms use liquid reserves to fund new investments. Therefore, higher cash flows will lead to higher liquid reserves as the firms need that as the primary source of financing (Deloof, 2003; Martínez-Sola et al., 2013). This is called the financing motive for holding cash. Besides,

the tendency to maintain a high level of cash can also be driven by precautionary motive (Deloof, 2003).

The earnings before interest and taxes (EBIT) is added with depreciation and amortisation minus with interest expenses, tax and ordinary dividends to measure operating cash flow, It is then divided by the total assets (Hill et al., 2013). As the prediction based on Trade-off Theory and Pecking Order Theory is contradicted to each other, the expected relationship between cash flow and cash holdings remain inconclusive.

The Trade-off theory states that firms with more volatile cash flows would accumulate more cash as a precautionary measure (Miller and Orr, 1966). The more volatile the firm's cash flows, the higher the tendency that the cash flows are inadequate to meet its financial obligations (Opler et al., 1999). Hence, we expect that cash flow uncertainty is positively related to corporate cash holdings. There is a need to maintain a higher level of cash as the firms are exposed to a higher frequency of cash flow shortages.

Han and Qiu (2007) found a positive relationship between cash flow variability and the cash holdings. Firms tend to increase their cash holdings as there is an increase in cash flow variability, mainly if the firm is financially constrained. Interestingly, no such relationship was found for unconstrained firms. This difference is probably due to the precautionary motive for holding cash. Financially constrained firms are firms that cannot fund all positive NPV projects, because of borrowing constraints. Hence, they need to keep a buffer, since otherwise, they would have to forego promising investment opportunities. Unconstrained firms have better access to external financing and thus don’t need precautionary cash holdings that much.

Firms may have some other liquid assets as a replacement for cash. For example, net working capital serves as an alternative to cash regarding liquidity. When a firm already has a lot of liquid assets other than cash, the need for large cash holdings goes down. When substitutes for cash are already abundantly in place, the call for cash holdings is weakened.

Liquidity is most often measured as net working capital. The net working capital is measured by current assets minus current liabilities divided by total assets. It thus measures the size of liquid assets, excluding cash. Several studies have confirmed the negative effect of liquidity on cash holdings (D'Mello et al., 2008; Ozkan and Ozkan, 2004).

Trade-off theory predicts a negative relationship between liquid asset substitutes and cash holdings (Al-Najjar, 2011; Ozkan and Ozkan, 2004). This is due to the convertibility of liquid assets other than cash into cash. Thus, a negative relationship between asset liquidity and cash holdings is expected. The following hypothesis is formulated:

Just like the presence of liquid assets other than cash, leverage may substitute for cash holdings too. It is an alternative way of funding. If leverage is already high, additional cash holdings may be redundant. A negative association between leverage and cash holdings would is expected.

Another issue is the persistence of leverage policy. Leverage reflects the past financing behaviour of the firm, which is likely to persist in the future. Firms that are currently highly levered have experience in taking on loans and may also have a good credit rating. Therefore, these firms have a good bargaining position when negotiating new debt contracts. Hence, firms having large amounts of debt are more likely to issue debt in the future, so that large cash holdings are unnecessary.

One could also argue that higher leverage increases the possibility of financial distress. Firms with high leverage may want to make up for this by taking on additional precautionary cash. High leveraged firms are subject to the discipline and monitoring of the financial markets. Thus, less leveraged firms tend to accumulate more cash.

Following this reasoning, leverage and cash holdings should be positively related. However, leverage is measured using the ratio of debt to sales. Based on the previous empirical findings and the trade-off theory, the following hypothesis is thus formulated.

Capital expenditures (CAPEX) represent cash outflows to the firm. Firms with large capital expenditures are firms making large investments. All other investments are just costs to the firm, so it is not reasonable that firms stockpile cash to fund capital expenditures. Therefore, firms are not expected to hold a buffer of liquid assets when facing large capital expenditures. Based on the pecking order theory, their cash holdings will be smaller, because CAPEX is being paid using internal funds. Firms with large capital expenditures will first draw down their cash holdings before addressing external financing. These firms spend money, rather than stockpile it. Thus, a negative relationship between the two is expected.

Past literature finds that capital expenditures increase a firm's borrowing capacity. By employing assets as collateral, the firm's needs for cash reserves can be lessened. Moreover, as productivity shocks that caused an increase in investments may result in lower level of cash (Riddick and Whited 2009).

Paying dividends reduces cash holdings directly because pay-outs are a cash outflow to the firm. The higher the dividends are, the less cash is available to stockpile. On the other hand, a dividend-paying firm can easily raise additional funds by cutting the

dividend. Therefore, dividend pay-out is negatively correlated with cash holdings (Gao et al., 2013; Opler et al., 1999; Subramaniam et al., 2011).

By reducing dividends pay out or disposing of non-financial assets, financially constrained firms can increase cash balances. In addition, dividends may also serve as a proxy for financial soundness. For instance, Almeida et al., (2004) consider firms with no dividend pay-out as financially constrained. Besides, firms which pay dividend enjoy external financing at a lower cost due to better track record. Therefore, dividend payment status needs to be treated with due diligence as it would signal the public on the firm's condition. Besides, a negative effect of dividend on liquid corporate assets is expected.

3.5 Corporate Governance

Agency theory gives an explanation of the relationship between the shareholders (principal) and the firm's manager (agent). According to agency theory, the agent might work against the principal's interest by prioritising self-interest over shareholder's benefit. Such conflict of interest is named as an agency problem.

While the agency problem exists, such problem can be reduced significantly with a sound governance and monitoring system in place. Otherwise, managers will likely to increase in perquisite consumption at the expense of shareholders.

The section proceeds with definitions of corporate governance and an overview of types of corporate governance mechanism in 3.5.2. Section 3.5.3 discusses the link between corporate governance and cash holdings at the firm- and country-level, Section 0 focuses on corporate governance and hospitality industry.

3.5.1 Definition

Although sizable studies had been done, however, there is no clear-cut definition of corporate governance. The Cadbury Report (1992) in the UK defined governance as "the system by which companies are directed and controlled. Board of Directors is responsible for the governance of their companies. The primary role of shareholders in governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate structure is in place" (Cadbury, 1992, p.15).

Furthermore, Shleifer & Vishny (1997) defined corporate governance more specifically towards the suppliers of finance. According to them, "corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of

getting a return on their investment" (p.737). It deals with the mechanism which ensures return on investment back to the investors.

At a broader definition which includes all types of firms regardless if it is incorporated or not. Turnbull (1997) defines corporate governance as a description of "all the influences affecting the institutional processes, including those for appointing the controllers and regulators, involved in organising the production and sale of goods and services" (p. 181). As for, Zingales (1998) defines corporate governance as "the complex set of constraints that shape the ex-post bargaining over the quasi-rents generated in the course of a relationship" (p. 3).

In Malaysian context, the Malaysian High Level Finance Committee in 1999 defines the term Corporate Governance as "the process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long-term shareholders value, whilst taking into account the interests of other stakeholders" (MCCG, 2012, p. viii).

Based on the above, the definition of corporate governance can be categorised into two general groups. The first group defines it in a broader perspective whereby the focus is on the way companies should be directed and managed. It is used to describe the way that the company is operating. On the other hand, it is defined with emphasis on the rules in the capital market in governing public listed companies. The definition covers how a company should be monitored combined with external factors such as legal requirement such as listing requirements, disclosure rules and market pressures.

3.5.2 Types of corporate governance mechanism

Corporate governance mechanisms consist of two major components namely, internal and external governance (e.g., Boubakri, Cosset, & Guedhami, 2005). Internal mechanisms include ownership structure, the board of directors, and timely and accurate disclosure of relevant information. While the external governance mechanisms involve external governance groups, the economic conditions, and availability of resources.

The main internal mechanism includes ownership structure and board independence. While legal and regulatory system plays a major role as external governance mechanism (Denis and McConnell, 2002). Previous literature reveals that concentrated ownership is one the primary causes of agency problems resulted from expropriation of minority shareholders and led to poor firm performance (Claessens, Djankov and Lang, 2000; Darmadi, 2016; Huyghebaert and Wang, 2012; La Porta et al., 1998; Shleifer and Vishny, 1997). It was argued that less concentrated ownership be preferred to ensure better governance. The better governance quality alleviates the managerial misappropriation risk and contributes to higher firm value (Dittmar and Mahrt-Smith, 2007).

Recent literature highlights the importance of the quality of corporate governance and its influence on corporate cash holdings. Managers in cash-rich firms tend to involve in opportunistic operations when the governance mechanisms are ineffective (Harford et al., 2008). According to Xie, Davidson, & DaDalt (2003), good governance is attributed to high board independence and more dispersed ownership. Outside directors, for instance, serve as an effective monitoring mechanism. Thus the higher percentage of outside directors on board is preferred for better governance (Joh and Jung, 2012).

Similarly, Dittmar et al. (2003) find that the less effective is the minority shareholder protection, the more a company hoard cash. In contrary, firms operating in developed markets retain less cash. The findings highlight the influence of agency costs and

shareholder protection plays a crucial role in mitigating the problem. Ineffective protection for shareholders is often linked to high cash ratios (Kalcheva and Lins, 2007).

3.5.3 Corporate governance and cash holdings

3.5.3.1 Firm-level

Assuming that monitoring mechanisms are imperfect, and individuals are driven by self-interest, the agency view proposes that managers are likely to appropriate firm resources. Self-centred managers tend to extract rents by engaging in value-decreasing investments to satisfy their preferences and gain discretionary power (Bao et al., 2012; Myers & Rajan, 1998; Jensen, 1986). In this sense, compared with other assets, cash can be easily converted into private benefits at a lower cost, and therefore represent a source for enhancing control by managers within firms (Baldenius, 2006; Myers & Rajan, 1998).

Earlier studies such as Jensen & Meckling (1976), suggest that managers prefer cash over debt or equity because cash enables them to use discretionary power over investment decisions and subject to less monitoring. Besides, managers of cash-rich firms have the tendency to invest in projects to generate personal gain at the expense of the shareholders (Jensen, 1986).

Colquitt, Sommer, & Godwin (1999) show that conflicts of interest between shareholders and managers have an ambiguous effect on cash holdings. Exceeding the optimal level of cash would be appropriate to take advantage of investment opportunities if managers are risk-averse. However, if managers are driven by self-interest, holding excess cash provides them with discretionary power to target their objectives which may not necessarily benefit the shareholders.

Opler et al. (1999) show that cash-rich firms are often associated with high investment opportunities and cash flow risk. Weak governance mechanism further aggravates the agency problem. Excessive cash hoard may lead to unprofitable investment acquisitions, which give a negative impact on firm value (Dittmar et al., 2003).

In a similar vein, Kusnadi (2011) documents that internal governance mechanisms are crucial in predicting corporate cash holdings for firms listed in Singapore and Malaysia. Their finding shows that there is a positive relationship between board size and cash ratio. While low block-holder ownership is negatively associated with cash. The findings are in line with the agency model. Board characteristics and ownership concentration are identified as the main cash holdings determinants.

Ozkan and Ozkan (2004) empirically study the relationship between managerial ownership and corporate cash holdings among UK firms from the year 1984 to 1999. Corporate cash holdings were observed to decline initially when managerial ownership goes up to 24%. The level of the cash continues to increase as managerial ownership reaches 64%, and then gradually decline with a subsequent increase in managerial ownership. Also, growth opportunities and cash flow are positively related to cash holdings.

Core, Guay, & Verdi (2006) examine if growth opportunities, monitoring and agency problems are determinants in answering the question to why not-for-profit organisations from the year 1992 to 2001 have persistent cash holdings over time. Backed by agency arguments, the authors find that show that excess endowments are negatively related to growth opportunities and positively related to CEO compensation. However, firms that hold more cash are likely less efficient, thus suggesting the presence of agency conflicts.

Dittmar and Mahrt-Smith (2007) demonstrate that the equity market places a higher value on cash holdings if a firm is well governed. Harford et al. (2008) show that firms with good corporate governance have higher cash compared to firms that are poorly governed. Moreover, Harford et al. (2008) show that firms which are poorly governed tend to dissipate cash through value-destroying acquisitions. While prior studies shed some light on the governance effect on cash holdings, no study has attempted to measure

the different governance effects on cash savings under different economic conditions. Further, the evidence of an interactive relation between financial constraints and corporate governance is unknown. Financially constrained firms are more dependent on cash as the primary source of finance to fund their investment opportunities, about unconstrained firms. Therefore, financially constrained firms should benefit more from good corporate governance as cash deployment in well-governed firms will be more efficient.

Chen & Chuang (2009) study a sample of high-tech firms listed on NASDAQ for the year 1997 to 2003. The authors study how corporate governance affects cash reserves. Based on 2643 firm-year observation, the findings show that CEO ownership, venture capitalist directors and independent directors positively affect cash holdings in high-tech firms. Chen & Chuang (2009) argue that large cash reserve can reduce firm's financial risk measured by leverage ratio.

In the unique setting of a municipal context, Gore (2009) discusses the agency, precautionary, and transaction incentives that managers have for holding cash in US local government departments. Using data from the year 1997 to 2003 Annual Survey of Governments by the Census Bureau, Gore (2009) shows that how governments with higher variation in revenues, lower state income and higher growth accumulate more cash than their counterpart municipalities.

Tong (2010) investigates the link between CEO risk incentives and corporate cash holdings under an agency theory. The author finds that managers who are risk-averse tend to hold more cash as a strategy to reduce firm risk. Using a measure of CEO risk incentives based on executive stock options for a sample of US firms from 1993 to 2000, the author finds higher management risk incentives may result in lower cash ratios, as cash holdings are less risky projects.

In another paper, Tong (2011) reveals that firm diversification has a negative impact on the value of cash holdings and a positive relation with the cash reserve level. Using segment-level and firm-level data from 1998 to 2005 with credit rating as a proxy for financial constraints, the author finds significant differences in the value of cash holdings among firms. The marginal value of cash holdings is U$ 0.92 for diversified firms, U$ 1.08 for single-segment firms, U$ 0.83 for unconstrained diversified firms, U$ 0.93 for constrained diversified firms, and U$ 0.49 for lower-governance diversified firms. By showing that diversified firms have a lower level of corporate governance, higher cash holdings, and a lower marginal value of cash,

Liu & Mauer (2011) show that greater equity incentives, as measured by the sensitivity of equity compensation to stock price volatility, are associated with higher corporate cash holdings. By matching compensation and financial data from ExecuComp and Compustat over the period 1992 to 2006, the authors find that CEO compensation has an adverse effect on the value of cash, while compensation incentives positively influence cash holdings by firms facing financial constraints.

3.5.3.2 Country-level

Apart from firm-level factors as discussed above, corporate governance may also affect cash holdings through legal and institutional factors. Dittmar et al. (2003) investigate 11,000 firms from 45 countries. The author finds that lower shareholder protection allows managers to accumulate cash. The major limitation identified in the study is that the proxy used as corporate governance unable to capture cross-sectional variation in firm-level corporate governance mechanisms. However, the problem can be overcome by adopting a broad array of firm-level attributes as suggested by Kusnadi (2011). Board independence, board size, board duality, and ownership structure are used as a proxy for internal governance mechanism.

Access to foreign capital is valuable for firms in such countries because poor country-level investor protection is often associated with less developed domestic capital markets. La Porta, Lopez-De-Silanes, Shleifer, & Vishny (1997) and La Porta et al. (1998) study a sample of 49 countries globally. They find that family control and ownership concentration are the most common features of corporate ownership in capital markets globally. They also find that countries with poor investor protections are often associated with smaller capital markets. The result supports the agency theory.

Moreover, Pinkowitz, Stulz, & Williamson (2006) highlight the importance of country-level legal protection in cross-country corporate governance studies. The authors adopted the Fama and French methodology in their cross-country study of cash, dividends, and governance. Their findings show that the cash value lesser compared to countries with better investor protection.

In addition, Faleye (2004) suggests that the proxy contests as a useful governance mechanism. Faleye (2004) study the relationship between takeover defences and cash holdings from a control-rights market perspective. They show that entrenched

management is insulated from market discipline resulting in significant reduction in firm value. High cash holdings firms are more likely to attempt acquisitions and are less likely to be targeted.

The impact of legal and institutional factors on corporate cash holdings emerge in recent years. Pinkowitz et al. (2003) and Dittmar et al. (2003) move beyond US firms by studying the determinants of firm cash holdings in cross nation settings. The result shows that the country-specific characteristics are significantly related to the cross-country variation in corporate cash holdings. The variables include corruption or country risk. The agency cost is higher in countries with high country risk and corruption due to higher agency costs. Lower quality governmental, financial and regulatory institutions could entice managers to divert corporate resources for private benefits. Pinkowitz et al. (2003) study a sample of firms in 35 countries over the period 1988 through 1999. They show that firms operating in high-risk countries should hold more cash. There is a positive relationship between corruption and cash level.

Pinkowitz et al. (2006) investigate how corporate governance influences the effects of cash holdings and dividends on firm values around the world. They find that the value of cash holdings for minority shareholders in countries with higher investor protection is more worthwhile than for similar groups in countries with weaker governance. However, there is a weak relationship between cash holdings and firm value in countries with low investor protection.

Using financial firm data from 39 countries over the period 1995 to 2004, Kusnadi (2011) show that companies in countries with weaker legal investor protection reserve more cash than their peers. They do not find evidence that greater development of the financial system influences cash-holding behaviour by firms after controlling for legal

investor protection. These results imply that the investment environment has a first-order effect in influencing international corporate policies on cash management.

Haw, Ho, Hu, & Zhang (2011) examine the role of share repurchases on firm value and corporate cash holdings around the world. They demonstrate that higher marginal value of cash is positively related to investor protection. Using annual firm observations from 33 countries over the period 1998 to 2004, the authors show that in countries with weaker investor protection have a lower value. The result is driven by firms distribute their excess cash via repurchases rather than dividends.

According to Huang, Elkinawy, & Jain (2013), stronger investor protection associated with straightforward accounting standards is positively correlated with corporate cash holdings.

Schauten, van Dijk, & van der Waal (2013) report that European firms with greater takeover defences are likely to hold a higher level of cash reserves, whereas other governance instruments, such as shareholder rights, disclosure, and board functioning, do not have a significant impact on cash value.

Nikolov & Whited (2014) show that firms with higher block holder and institutional ownership ratios are likely to have a greater loss of shareholder value, higher cash holdings, and higher managerial perquisite consumption.

Yung & Nafar (2014), Ferreira & Vilela (2004) and Dittmar et al. (2003) provide empirical evidence that better law enforcement and concentrated ownership are negatively related to the level of cash held by firms around the world.

3.5.4 Corporate governance and hospitality firms

In the hospitality sector, issues regarding corporate governance have gradually attracted research attention. However, current research on tourism governance is limited. Existing studies include macro governance structure (Altinay and Bowen, 2006); ownership structure (Andersson and Getz, 2009); board authority (Marzano and Scott, 2009); collaborative governance (Vernon et al., 2005); and, strategic governance (Chathoth and Olsen, 2003).

While there have been several empirical studies emphasising the importance of governance of hotel firms (Dahlstrom et al., 2009; Oak and Iyengar, 2009; Ozdemir and Upneja, 2012), only a handful of research has looked at the hospitality industry. Research on the relationship between board governance and financial performance are lacking. In contrast, research in non-hotel sectors has increasingly emphasised the importance of board independence, CEO duality and managerial ownership to firm performance (De Andres et al., 2005; Donnelly and Mulcahy, 2008; Kaymak and Bektas, 2008; Kiel and Nicholson, 2003).

Therefore, there is a need to close this gap by exploring the influence of board governance on the financial performance of hospitality firms. This study tests a research model that examines the relationship between board independence, CEO duality, managerial ownership and hotels' financial performance. The results contribute to the tourism literature on corporate governance of hotel firms.

3.6 Firm Performance

3.6.1 Cash holdings and firm performance

Cash holding policy cannot only effectively reflect firms' operating and financial strategies, but also is closely related to corporate governance and macroeconomic environment. Increased cost, loss of investment opportunities and agency problems are all closely linked with corporate performance. Under the agency perspective, if managers engage in wasteful capital spending, acquisitions, or excessive prerequisite consumption, this might be reflected in lower shareholder returns via stock prices (Mikkelson & Partch, 2003). The emergence of these challenges makes it urgent to study the influencing factors of cash holdings and the relationship between cash holdings and corporate performance.

Financial slack may lead a firm to less likely to give up valuable investment opportunities (Myers and Majluf, 1984). This implies that the higher the level of cash, the greater the firm value is. However, it must be treated with caution as cash is the lowest return assets.

Weak corporate governance and the deal with holding cash can have many adverse impacts on the firm value (Harford et al., 2008) because some managers prefer to invest in properties and capital expenditure. These managers dissipate cash faster than saving it for more flexibility on plans. R&D is also affected by corporate governance. Companies with a high amount of cash and weak shareholder rights spend less on R&D.

According to Huang & Wang (2009), expected returns are driven by investments in cash and physical capital. Specifically, the author shows that cash holdings increase future returns on physical capital and firm stocks. As Gao (2011) points out, excess cash holdings lead to an adverse selection effect on stock prices in signalling an overvaluation for issuance financing. Similarly, Frésard (2012) suggests that corporate cash holdings are more sensitive to stock prices as the firm-specific return variation increases.

According to Frésard (2012), this firm-specific return variation is not explained by market and industry movements and provides new information to investors that are not available to managers. Thus, it may positively influence cash-saving decisions via stock market learning.

Chang, Benson, & Faff (2016) find that excess cash holding is positively linked to firm value. Further, there is some evidence to show cash holdings is more valuable to constrained firms compared to unconstrained firms. Besides, the value impact is also more pronounced during the crisis.

Mikkelson and Partch (2003) study a sample of 89 public traded US firms that held more than 25% in cash holdings over the period 1986 to 1991. By contrast, their findings show that persistent large cash holdings do not lead to poor operating performance and agency conflicts in cash-rich firms compared to their cash-poor counterparts. The results show that firms with a higher cash holding ratio have greater operating performance, higher R&D spending, a higher market-to-book ratio, greater asset growth, and a lower leverage level than their peers matched by size and industry segment. These findings imply that a higher cash balance is the best cash level for these firms to support their corporate policies without devaluing firm performance.

3.6.2 Tourism crisis and hospitality firm performance

Past studies have reported that tourism crises such as terrorism, natural disasters, and epidemics pose a great danger to the international tourism development (Chen et al., 2007; McAleer et al., 2010). For example, the inbound tourism development due to the earthquake on September 21, 1999, in Taiwan were severely affected. Besides, the terrorist attacks of September 11, 2001, in the US; and the outbreak of Severe Acute Respiratory Syndrome on April 22, 2003, weakened the financial performance of Taiwanese hotel companies. Empirical studies such as Chen et al. (2005) have confirmed this expectation. The authors find that there is a significant relationship between these crisis events on hotel stock performance. Not only that, the number of international tourists dropped and caused a dip in hotel sales earnings. Thus, investors' perceived riskiness of cash flows is important and shall be taken into consideration.

3.7 Summary of Literature Review

3.7.1 Theoretical prediction

Table 3.1 summarize the theoretical predictions about the relationship of the variables on cash holdings.

Table 3.1: Summary of Theoretical Prediction

Variables	Definitions	Trade-off Theory	Pecking Order Theory
Dividend's payment	dividend/ stock price	+/-	
Growth opportunities	Tobin's Q	+	+
Cash flow variability	cash flow standard deviation	+	
Cash flow	net operational income + depreciation	-	+
Liquid assets substitutes	working capital net of cash	-	
Accounts payable	Payment period for accounts payable	+	-
Leverage	total debt/ total assets	+/-	-
Capital expenditures	capital expenditures	+	-
Size	natural logarithm of total assets	-	+

3.7.2 By Category

Table 3.2 Summary of cash determinants literature (by category)

		Region				Sample			Theories			
Authors	**Year**	**Global**	**Asia**	**North America**	**Europe**	**Firm**	**Industry**	**Country**	**Trade-off Theory**	**Pecking order theory**	**Agency theory**	**Others**
Acharya et al.	2007			1		1			1			1
Acharya et al.	2013			1		1					1	
Acharya et al.	2014			1		1			1	1		
Acharya et al.	2012			1		1			1			
Almeida & Campello	2010			1		1			1			
Almeida et al.	2004			1		1				1		
Almeida, Campello & Hackbarth	2011			1			1		1			1
Almeida, Campello & Weisbach	2011					1			1			
Almeida et al.	2014											1
Al-Najjar	2013		1			1		1				1
Al-Najjar	2015				1	1			1			
Alvarez et al.	2012					1						1
Anderson & Carverhill	2012			1		1			1			
Arslan et al	2006		1								1	
Baldenius	2006					1						1
Bao et al.	2012			1		1						1
Bates et al.	2009			1		1			1			
Bigelli & Sanchez-Vidal	2012				1	1	1					1

		Region				Sample			Theories			
Authors	**Year**	**Global**	**Asia**	**North America**	**Europe**	**Firm**	**Industry**	**Country**	**Trade-off Theory**	**Pecking order theory**	**Agency theory**	**Others**
Boutin et al.	2013			1								1
Brown & Peterson	2011			1		1						1
Campello et al.	2010	1				1			1			
Campello et al.	2011	1				1					1	
Chen	2008			1		1					1	
Chen & Chuang	2009			1		1						1
Chen et al.	2012		1			1						1
Chen et al.	2014		1			1						1
Chen et al.	2015	1				1		1			1	
Colquitt et al.	1999			1		1					1	
Core et al.	2006			1		1						1
D'Mello et al.	2008			1		1	1				1	
Davydova & Sokolov	2014					1			1	1		
Decamps et al.	2011					1					1	1
Denis & Sibilkov	2010			1		1					1	
Dittmar & Mahrt-Smith	2007	1				1		1			1	
Dittmar et al.	2003	1				1		1			1	
Drobetz et al.	2010	1				1	1				1	
Duchin	2010			1		1					1	
Elyasiani & Zhang	2015			1		1					1	
Faleye	2004			1		1					1	
Faulkender & Wang	2006			1		1					1	
Feng & Johansson	2014		1			1					1	

		Region				Sample			Theories			
Authors	**Year**	**Global**	**Asia**	**North America**	**Europe**	**Firm**	**Industry**	**Country**	**Trade-off Theory**	**Pecking order theory**	**Agency theory**	**Others**
Ferreira & Vilela	2004				1	1		1	1		1	
Francis et al.	2014			1		1						1
Fresard & Salva	2010			1		1	1				1	
Fresard	2011			1		1					1	
Fresard	2010	1				1		1				1
Foley et al.	2007			1		1					1	
Gamba & Triantis	2008					1						1
Gao	2011			1		1					1	
Gao et al.	2013			1		1	1				1	
Gore	2009			1			1				1	
Han & Qiu	2007			1		1					1	
Harford	1999			1		1	1		1			
Harford et al.	2008			1		1					1	
Harford et al.	2014			1		1	1				1	
Haushalter et al.	2007			1		1	1					1
Haw et al.	2011	1				1			1	1		
Hill et al.	2014			1		1						1
Hoberg et al.	2014			1		1	1					1
Holmstrom & Tirole	1998					1					1	
Huang	2009			1		1			1			
Huang et al.	2013	1				1					1	
Itzkowitz	2013			1		1			1			
Jain et al.	2013			1		1						1

		Region				Sample			Theories			
Authors	**Year**	**Global**	**Asia**	**North America**	**Europe**	**Firm**	**Industry**	**Country**	**Trade-off Theory**	**Pecking order theory**	**Agency theory**	**Others**
Julio & Yook	2012	1						1				1
Kahle & Stulz	2013			1		1					1	1
Kalcheva & Lins	2007			1		1					1	
Kim & Bettis	2014			1		1			1			1
Kim et al.	1998		1			1	1					1
Kuan et al.	2011			1		1						1
Kusnadi	2011	1				1	1					1
Lamont	1997			1		1						1
Lee & Lee	2009		1					1			1	
Lee & Powell	2011	1				1		1			1	
Levitas & McFadyen	2009			1		1						1
Lins et al.	2010	1				1						1
Liu	2011			1		1			1			
Liu et al.	2014				1							1
Liu et al.	2015		1								1	
Louis et al.	2012			1		1						1
May	2014			1		1						1
Megginson et al.	2014		1			1	1	1				1
Mikkelson & Partch	2003			1		1	1		1			
Neamtiu et al.	2014			1		1					1	
Nikolov & Whited	2014			1		1						1
Opler et al.	1999			1		1	1					1
Ozkan & Ozkan	2004				1	1						1

		Region				Sample			Theories			
Authors	**Year**	**Global**	**Asia**	**North America**	**Europe**	**Firm**	**Industry**	**Country**	**Trade-off Theory**	**Pecking order theory**	**Agency theory**	**Others**
Palazzo	2012			1		1						
Pinkowitz & Williamson	2001	1				1		1	1			1
Pinkowitz et al.	2006	1				1		1	1			
Pinkowitz et al.	2013			1		1					1	
Qiu & Wan	2014			1		1	1					1
Ramirez & Tadesse	2009	1				1		1	1			
Riddick & Whited	2009	1				1				1	1	
Schauten et al.	2013				1	1	1	1			1	
Song & Lee	2012		1			1						1
Subramaniam et al.	2011			1		1	1					1
Sun et al.	2012			1		1					1	
Tong	2010			1		1					1	
Tong	2011			1		1	1				1	
Wasiuzzaman	2014		1			1					1	
Wu et al.	2012		1			1					1	
Yu et al.	2015		1			1					1	
Yun	2009		1			1					1	

3.8 Identification of Research Gap

As described above, trade-off, pecking order theories and agency theories, based mainly on studies by Jensen (1986); Myers (1984) and Jensen and Meckling (1976). These theoretical perspectives have been applied in a significant proportion of articles on cash holdings.

Corporate cash holdings have gained growing interest in the corporate finance literature after Opler et al. (1999). Nevertheless, existing studies focused mainly on the determinants of cash holdings at firm-level. Only a handful of studies have emphasised the impact of corporate governance in explaining cash holdings recently.

Besides, studies on the relationship between cash holdings and firm performance are limited despite the importance of cash in determining the market value of the firm (Kalcheva and Lins, 2003; Pinkowitz and Williamson, 2002). Cash holdings were identified as one of the major explanatory variables but the value shareholders place on cash is subject to firm characteristics.

In addition, although the studies on corporate governance and cash holdings have been established before the present study, limited studies shed light on the effect of the impact of country-level governance and tourism crises. It is unknown whether the types of crisis influence corporate governance on cash holdings decision and firm performance. Thus, this leads to a research gap in the literature.

Despite the topic's overall popularity in the mainstream management field, hospitality researchers have focused on a single dimension of corporate governance which is the internal governance. Studies on alternative dimensions of corporate governance in the hospitality industry are lacking. Therefore, there is a need to explore the impact of external governance on hospitality firms in ASEAN-5. This research is highly relevant in

today's corporate world, as hospitality companies are under tremendous amount of pressure to adopt strict governance principles and to prove to investors that their governance is in the shareholders' best interest.

Existing literature rely mainly on agency theory. However, agency theory may not provide a full account of cash holdings decisions (Lu et al., 2009). Resource dependency theory, upper echelons theory, and institutional theory are concerned with the relationship between an organisation and a set of actors in the environment. Both theories assume various external pressures constrain the organisational choice and that organisations are concerned with building legitimacy and acceptance vis-a`-vis external stakeholders.

Resource dependency theory emphasises the need of the firm to access resources from other actors in the environment. The theory also describes how resource scarcities force organisations to pursue innovations that use alternative resources (Pfeffer and Salancik 1978; Sherer and Lee 2002). Based on upper echelons theory, managers may make suboptimal strategic decisions without realising or intending so. Hence, personal characteristics of top managers may prevent levels of cash holdings from being optimal. The institutional theory describes how an organisation adopts practices that are considered acceptable and legitimate within its organisational field (Scott 1995). Thus, these theories describe how organisations face competitive pressures and may depend on, or be impacted by, other actors in the environment. These theories are expected to be particularly relevant in explaining corporate cash holdings behaviour in the hospitality industry. Taken into these considerations, a theoretical framework is formed and presented in Section 3.9.

3.9 Theoretical Framework

Table 3.3 presents a summary of the theoretical framework adopted in this study. The framework is constructed based on the reviewed past literature as presented in section 3.4 to section 3.7. The framework gives an overview of the structure of this study where variables are identified via past literature to test and answer three research questions as stated in section 1.5.

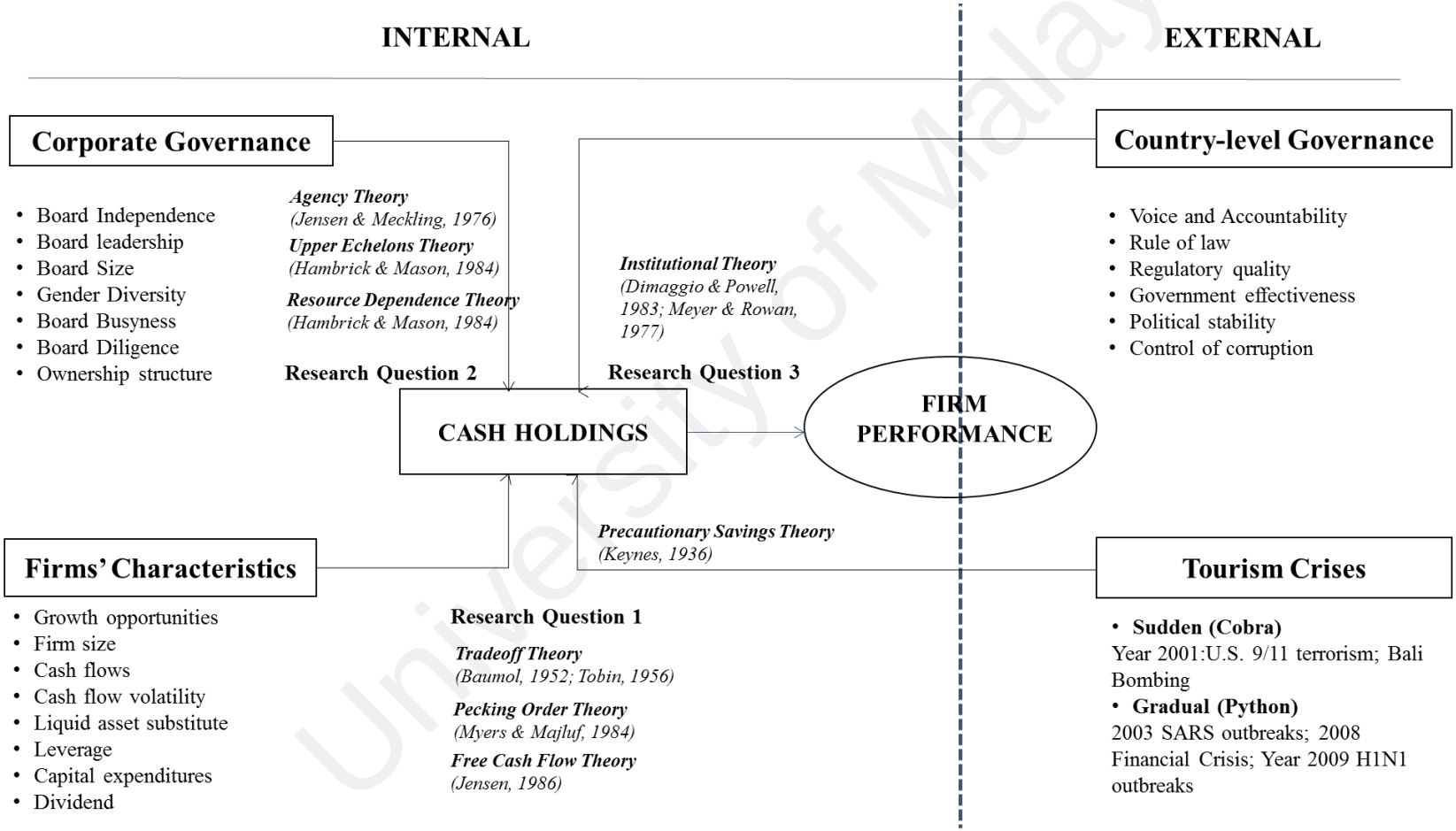
Existing empirical literature on cash holdings predominantly focuses on public listed firms in the developed market. However, the determinants of the cash holdings remain under-researched especially in the context of emerging market and hospitality industry. There is only a handful of cash holdings research done in the context of Malaysia. Research Question 1 thus help to examine the determinants of corporate cash holdings and its linkages to the cash theories, which include: trade-off, pecking order theory and agency theories. Besides, this study shed light on the potential use of cash as a buffer against uncertainty during the crisis. Although studies on cash holdings are not new, however, previous studies rarely look at the impact of cash during a crisis. Variables such as the firm characteristics as identified in the literature are tested and discussed in details in Chapter 5.

In addition, this study contributes to a growing body of research related to the board effectiveness and its relation to cash holding decisions which are addressed by Research Question 2 in Chapter 6. By taking into account the uniqueness of the hospitality firms, we can extend our knowledge on how the board characteristics, from an agency theoretical perspective, can affect the level of cash holdings. Furthermore, this study examines the effect of board effectiveness on cash holdings by taking into account the structure of the board of directors along with gender diversity and busyness, which were not widely addressed in existing literature. Both board attributes are rarely studied in the

cash literature even though it has a close relationship with the agency costs. Although previous studies have linked board characteristics to firm performance, limited studies examine the impact of the board characteristics with firm performance to tourism crises.

Unlike existing studies, this study aims to study both internal and external factors on corporate cash holdings. Most literature emphasises more on managerially controllable variables. Although informative, these research fall short of delineating a holistic view of corporate cash holdings across institutions. The effects of the external institutional factors on corporate cash holdings are often omitted in the existing literature. Despite the significant impact of institutional factors on corporate behaviours and strategic choices, especially in emerging economies, most studies conjectured that institutions only serve a "background" (Peng et al., 2008). Institutions play a crucial role in shaping the firm strategies, practices and performance and affect the firm performance in emerging economies. Ignoring institutional environments in examining the determinants of cash holdings thus limit the understanding of corporate cash policy. Therefore, this study attempt to reveal the effect of country governance on cash holdings and its impact firm performance in hospitality firms by incorporating the institutional theory. This study intends to narrow the gap in the current literature on corporate cash holdings by tackling research question 3 which is further discussed in Chapter 7.

Table 3.3 Theoretical Framework



CHAPTER 4: METHODOLOGY

4.1 Introduction

There are different forms of data available for analysis. If more than one unit is studied over different periods of time, it is called panel data. The section provides an introduction to the aims, underlying theory, assumptions and practical application of panel regression models, such as fixed, random effects and Generalised Method of Moments (GMM) models. This section gives an overview of the use of these methods to analyse panel data.

4.2 Panel Regression and Assumptions

Observations on many individual economic units, such as firms, over a period, consists of a panel, cross-sectional time-series or longitudinal data set (Wooldridge, 2002). Panel data differs from purely time-series or cross-sectional data. Instead, panel data analysis considers both temporal and spatial dimensions. The temporal dimension refers to the variables of these cross-sectional groups that change over time. Whereas, the spatial dimension includes a group of cross-sectional units of samples, for example, individuals and companies. Panel data requires the same responding units to be computed at a different time so that data are dependent. On the other hand, pooled data usually take various samples over the time and are assumed to be independent. A balanced panel exists when the dataset has no missing values. Otherwise, it is called an unbalanced panel.

Hsiao (2003) also presents several benefits of adopting panel data from past literature. In comparison to either stand-alone time series or cross-sectional data, panel data include a larger number of observations. Reducing the possible multicollinearity among independent variables and increasing the degrees of freedom improves the reliability and efficiency of the model estimates. Next, panel data allow controlling the effects of missing or unobserved variables more efficiently. Omitted variables may lead to changes in time-

series and cross-section intercepts. For example, firms may have latent characteristics which are unobservable, such as economic conditions, that remain constant among units but varies over time. Panel data allows control for this type of omitted variables through observing the changes of dependent variable over a period observation (Wooldridge, 2002). Thus, the risk associated with an underspecified model can be mitigated. In addition, panel data permits researchers to analyse dynamic relationships which cannot be performed using only cross-sectional data. Similarly, panel data allows cross-sectional relations investigation that prohibits time-series data. It allows testing or controlling for within-subject change over time for aggregate data. It gives essential detail that aggregated time-series data often overlook. Lastly, panel data allow more accurate predictions for individual outcomes compared to solely time series data. However, the major drawback of panel data analysis is where the analysis and interpretations become more complex (Hsiao, 2003).

4.3 Static Panel Data Models

Panel data comprises time series and cross-sectional dimension. Therefore, two perspectives come into play on the differences between either the time series or cross-sectional dimension. Unit effects model refers to fixed time dimension and differing cross-sectional dimension. On the other hand, switching the dimensions will result in time effects model (Torres-Reyna, 2007). Unit effects model considers each unit has heterogeneous features, such as location, which is either omitted or unobservable. Whereas, time effects model regards different time has unique dynamics, which plays an important role to explain the variance in the model. Generally speaking, the results under these two perspectives are relatively different due to their different underlying assumptions.

Traditionally the approach in panel data regression has been the unit effects model for two main reasons. Firstly, the majority of units in a panel are distinct for many unobservable or immeasurable factors although these units may come from the same group. Secondly, the time frame in a panel data set tends to be short, normally ranging from five to ten years. Therefore, the changes during the period are often negligible. Nevertheless, both unit effects and time effects model are examined to ensure the accuracy of this study.

There are three common panel data models which include: (i) pooled regression models; (ii) random effects models; and (iii) fixed effects models. Among these models, the pooled regression model is considered straightforward as it assumes constant coefficients in both slopes and intercepts. The model estimates a single equation for time series and cross-sectional data.

4.3.1 Pooled Regression Models

The pooled regression model is also known as the constant coefficients model. As highlighted in Mao (2006), since there are no spatial or temporal effects in constant coefficient models, the analyst can pool the data to run an OLS regression. (4.1 mathematically represents these constant coefficients model (i.e., OLS). However, such a strong assumption that neither spatial nor temporal effects are significant is rare.

$$Y = \beta_o + \sum_{i=1}^{7} \beta_i X_i + \varepsilon \quad \textbf{(4.1)}$$

Where,

Y= cash ratio (CASH)

$X_1 \ldots X_7$: Leverage (LEV), Firm size (SIZE), Cash flow variability (VAR), Cash flow (CF), Liquid Asset Substitutes (LIQ), Capital Expenditure (CAPEX), Dividend (DIV)

β_0: constant

$\beta_1 - \beta_7$: coefficients of $X_1 \ldots X_7$; and the error term or remainder term ε.

Some of the explanatory variables are not likely to be strictly exogenous. In that case, the variables may not be free from idiosyncratic disturbances. This further augment the presence of correlation between the independent variables and error terms. As a result, the model produces inconsistent coefficient parameters in OLS estimation.

4.3.2 Random Effects Model

The random effects regression model is also known as the error component model. The model estimates the error term for units or time periods with assumptions of the same intercept and slopes (Bell and Jones, 2015). The random effects model can be used to mitigate the potential heteroscedasticity problem which might be associated with the OLS. In fact, weight least squares (WLS), as part of GLS/FGLS models, is often used to solve heteroscedasticity problem. The random effects models provide greater statistical power and parsimony, but they assume that the explanatory variables and the remainder term are uncorrelated (Yaffee, 2003). Otherwise, the random-effects model will be biased even it is efficient.

The random effects model analyses error variance structures affected by the unit and time, assuming the same slopes and intercept (Park, 2005). Random effects models can be mathematically expressed as Equation (4.2) for unit effects, and as Equation (4.3) for time effects.

$$Y = \beta_o + \sum_{i=1}^{7} \beta_i X_i + \varepsilon \text{ whereas } \varepsilon = \mu_i + e \ (i = 1, \dots, N) \quad \textbf{(4.2)}$$

$$Y = \beta_o + \sum_{i=1}^{7} \beta_i X_i + \varepsilon \text{ whereas } \varepsilon = \mu_i + e \ (t = 1, \dots, T) \quad \textbf{(4.3)}$$

Where,

Y: Cash ratio (CASH)

$X_1 \ldots X_7$: Leverage (LEV), Firm size (SIZE), Cash flow variability (VAR), Cash flow (CF), Liquid Asset Substitutes (LIQ), Capital Expenditure (CAPEX), Dividend (DIV)

β_0: constant

$\beta_1 - \beta_7$: coefficient

ε: General total error term

μ_i or μ_t: unobservable unit effects or time effects

e: the error term or remainder term

4.3.3 Fixed Effects Model

The fixed effects regression controls the effects of error terms, which either differ across units or over time. The fixed effects model assumes that individual cross-section unit has a distinctive intercept that is constant throughout the year. Each time series has its intercept which continues to be constant across units (Torres-Reyna, 2007). Conceptually, the fixed effects model creates a set of dummy variables to control any differences among units or a group of time dummy variables over time. Thus, the fixed effects models use an OLS estimation method. Mathematically, fixed effects models can be written as Equation (4.4) with unit effects, or as Equation (4.5) with time effects.

$$Y = \beta_o + \sum_{i=1}^{7} \beta_i X_i + \sum_{j=1}^{N} \beta_i W_i + \varepsilon \quad \textbf{(4.4)}$$

$$Y = \beta_o + \sum_{i=1}^{7} \beta_i X_i + \sum_{j=1}^{N} \beta_i Z_i + \varepsilon \quad \textbf{(4.5)}$$

Where,

Y: Cash ratio (CASH)

$X_1 \ldots X_7$: Leverage (LEV), Firm size (SIZE), Cash flow variability (VAR), Cash flow (CF), Liquid Asset Substitutes (LIQ), Capital Expenditure (CAPEX), Dividend (DIV)

β_0: constant

$\beta_1 - \beta_7$: coefficients of $X_1 \ldots X_7$

Z_t: time effects dummy variables

T: the number of years

N: the number of firms;

ε: the remainder error term

However, one of the drawbacks of the fixed effects model is the model may include too many dummy variables that could weaken the statistical power and yield multicollinearity problems (Yaffee, 2003). In general, fixed effects model examines how the unit and time affect the intercept, assuming the constant slopes and variance across the units (Park, 2005).

4.3.4 Model Testing Procedure

Several tests were employed to determine which model is most suitable and the test flows are illustrated in Figure 4.1. Pooled OLS regression will be run first. From two separated perspectives which are unit effects and time effects, the Hausman Test will be performed. The test determines which model, fixed effects or random effects is better under either unit effects or time effects conditions. Random effects and fixed effects models' analyses, as well as their significance tests such as incremental F test and the Breusch and Pagan LM test, will then be performed.

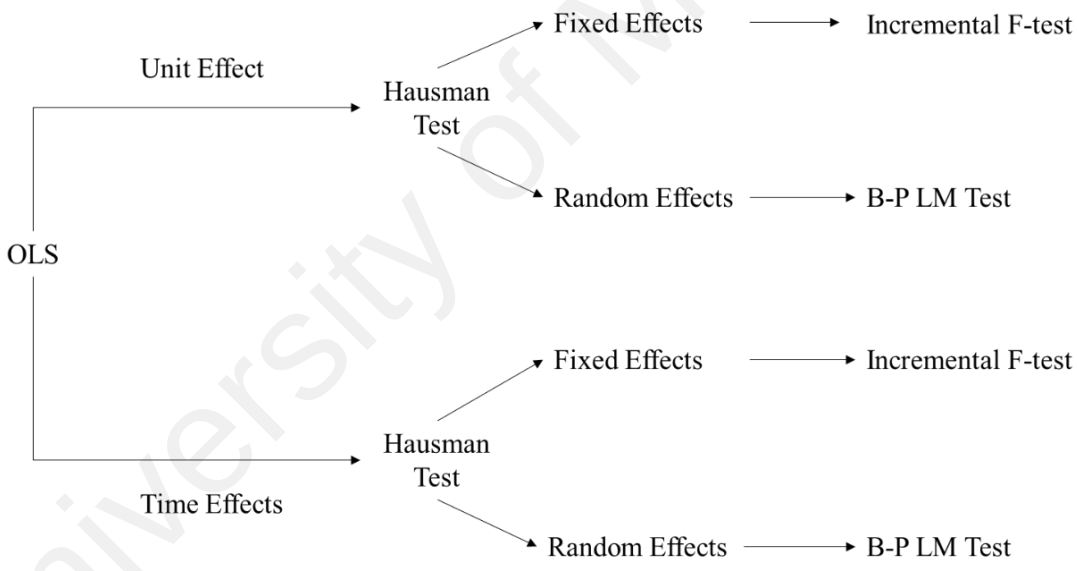


Figure 4.1: Flowchart of model testing procedures

An incremental F test (a simple Chow test) examines the significance of these dummy variables). A fixed effects model is tested if it is better than an OLS regression based on loss of goodness-of-fit (Park, 2005; Baltagi, 2005). If the null hypothesis is rejected, the fixed effects model is preferred. Breusch-Pagan Lagrange Multiplier (LM) helps to determine the suitability of the random effects model over the OLS regression (Park, 2005). The null hypothesis is that cross-section variance components are zero. The normal OLS is deemed suitable if the null hypothesis is not rejected. The Hausman specification test is usually used to check if random or fixed effects models are most suitable (Hausman, 1978). In general, random effects model is considered better in terms of efficiency. On the other hand, fixed effects model is less efficient but more consistent. The Hausman test checks the trade-off and determines an efficient model which can produce consistent results at the same time. The test also checks if the coefficients by efficient estimator are similar to the fixed effects estimator. If p-value < 0.05. it will suggest a fixed effects model, whereas an insignificant p-value (>0.05) indicates it would better to adopt a random effects model instead.

4.4 Endogeneity issues

Past literature highlighted the issue of endogeneity as the majority of corporate decisions are determined endogenously. Wintoki, Linck, & Netter (2012) states that empirical corporate finance research often suffers from serious endogeneity issues in explaining the causal relationship on financial decisions. For example, exogenous factors can impact the level of cash holdings and other explanatory variables like debt ratio, cash flow on the right-hand side of the formula. This is due to the difficulty in identifying the relevant exogenous factors. Another example is board characteristics. Board characteristics are not exogenous in nature (Sila et al., 2016). Such characteristics are often endogenously determined by companies to cater to changing environments. In a similar vein, Fama and Jensen (1983) and argue the scope and complexity of the company impact the board characteristics.

Several econometric issues may arise in estimating the panel data models as listed in section 4.3. Firstly, the lagged dependent variable ($CASH_{it-1}$) creates autocorrelation problem. Secondly, the regressors and the error term in the model may be correlated. Thirdly, the companies have time-invariant characteristics thus may correlate with the regressors. This problem arises because of the fixed effects in the error term in Equation (4.5): $u_{it} = v_{it} + e_{it}$. Therefore, to better estimate the effect of board characteristics on corporate cash holdings, there is a need to identify a model which includes the impact of unobserved heterogeneity. The OLS and fixed effects estimators which were discussed in section 4.3 are therefore unable to produce reliable inferences for these models.

Prior work emphasizes that endogeneity bias will result in inconsistent results and cause spurious findings and subsequently misleading theoretical and managerial implications. Identifying the endogenous variable which correlates with the remainder term is challenging because the remainder term in endogeneity bias is not easily observed.

The literature emphasizes three primary instances where the condition of exogeneity becomes violated, and therefore endogeneity occurs. It can be categorized as unobserved; simultaneity, or dynamic endogeneity (Wooldridge, 2002).

4.5 Addressing Endogeneity

There are several methods to deal with endogeneity issues. Roberts and Whited (2013) detail the latest econometric techniques designed to address endogeneity and identification concerns. One of the usual empirical strategies to handle endogeneity issues is the use of instrumental variables techniques. The basic idea behind instrumental variables techniques is to decompose the variations in the endogenous independent variable.

An instrumental variable does not directly influence the dependent variable but affects it indirectly through the endogenous independent variable. Instrumental variables techniques may use different estimators. One of the most commonly used instrumental variables estimators is two-stage least squares (2SLS). However, identifying truly exogenous instrumental variables which highly correlated with the endogenous regressors but are uncorrelated with the residuals are difficult in practice.

The challenges associated with identifying valid instruments have thus led to alternative approaches for correcting endogeneity, such as the GMM. GMM include a system of two sets of equations introduced by Blundell and Bond (1998). It assumes that the remainder terms are independently and identically distributed (i.i.d.) across the observed dataset. Notably, GMM provides solutions to all three types of endogeneity as mentioned in section 4.4. In contrast to 2SLS, Wintoki et al. (2012) state that GMM is not dependent on the exogenous instruments which are difficult to identify in practice. Instead, there is a system of two sets of equations where it has its own internal instruments each (Abdallah et al., 2015).

4.6 Dynamic nature of cash holdings

In addition, past studies such as Opler et al. (1999) highlight the dynamic nature of cash holdings. The study shows that cash balances are mean reverting in nature. Companies generally have an unobservable target cash level. However, real cash holdings only adjust partially to cash targets. Therefore, the adjustment process is delayed due to the adjustment of positive costs. Very often the explanatory variables used in the static models need to be included even though the firms have targeted cash holdings.

Assuming that the unobservable target cash holdings ratio of firms, $CASH_{it}^{*}$, is included as a function of several variables, K, and an error term ε_{it}.

$$CASH_{it}^{*} = \Sigma_k \beta_k x_{kit} + \varepsilon_{it} \quad \textbf{(4.6)}$$

Wasiuzzaman (2014) is one of the pioneers in examining cash holdings behaviour in Malaysia. According to the author, the current level of cash adjusts to its targeted level gradually. As there are adjustments costs involved. the adjustment is not instantaneous. Wasiuzzaman (2014) describe the process using the equations as follow:

$$CASH_{it} - CASH_{it-1} = \gamma(CASH_{it}^{*} - CASH_{it-1}) \quad \textbf{(4.7)}$$

where $(CASH_{it} - CASH_{it-1})$ is the adjustment required to achieve the level as targeted. But if γ= 1, then $CASH_{it}$= $CASH_{it}^{*}$ indicating that the firm shall adjusts instantaneously to the targeted level of cash.

By substitution of equation (4.6) to (4.7) results in:

$$CASH_{it} = \gamma_0 CASH_{i,t-1} + \Sigma_{k=1}\gamma_k x_{kit} + u_{it}$$

(4.8)

Where $\gamma_0 = 1 - \lambda$, $\gamma_k = \lambda\varepsilon_{it}$. (where u_{it} has the same properties as ε_{it}. Finally, also including α_i and α_t, the dynamic specification takes the following form

$$CASH_{it} = \gamma_0 CASH_{it-1} + \gamma_1 SIZE_{it} + \gamma_2 VAR_{it} + \gamma_3 CF_{it} + \gamma_4 GRO_{it} + \gamma_5 LEV_{it} + \gamma_6 DIV_{it} + \gamma_7 CAPEX_{it} + \gamma_8 LIQ_{it} + \gamma_9 NWC_{it} + \alpha_i + \alpha_t + u_{it}$$

(4.9)

4.7 Dynamic Panel Model

There are several reasons why the GMM estimators are important. GMM model controls three main type of endogeneity as highlighted in section 4.4. They are simultaneity; unobserved heterogeneity; and dynamic endogeneity (Wooldridge, 2002). Among them, the GMM controlled the various type of endogeneity by taking into account past cash holdings measure by the lagged values of the dependent variable ($CASH_{t-1}$). $CASH_{t-1}$ is used as one of the regressors in the model. In addition, GMM also controls for country-specific effects (λ), which is not possible via country-specific dummies because of the regression's dynamic structure. Lastly, one of the assumptions by GMM is that no second-order serial correlation is present. The serial correlation problem does not present in first differences errors. As a result, Arellano and Bond (1991) suggest that there is a need to check for the absence of second-order serial correlation to ensure the consistency of the estimations. Besides, it is also important to test if the instruments are uncorrelated with the remainder term. The Sargan test developed by Sargan (1958) for over-identifying restrictions is employed.

The emergence of the GMM technique when using panel data can overcome some of the unresolved issues highlighted in the past studies in addressing the appropriateness of econometric techniques. The adoption of the model could be considered as a breakthrough in the methodological development of cash holdings research. It was widely employed by recent research such as Kuan et al. (2011) and Uyar and Kuzey (2014). The dynamic nature of the relationship between governance and cash holdings makes GMM a better model to offers more accurate coefficient estimates in comparison with alternative models in terms of efficiency and consistency.

4.7.1 Difference GMM

The estimators in the dynamic panel models may be inconsistent because of the unobserved correlation between the lagged dependent variable and country-specific effects. Past studies such as Arellano and Bond (1991) proposed to use GMM and the lagged values of the first difference of the endogenous variables. First, the equation is transformed into a first-difference to eliminate the country-specific effect. Then, the lagged levels of the endogenous variables are employed as the instruments to eliminate possible simultaneity bias. Such approach is called the Difference GMM. Difference GMM is also known as the Arellano and Bond (1991) estimator, or AB estimator. The difference GMM enhances the efficiency of the model by assuming that the first difference in instrumenting variables and the fixed effects are uncorrelated.

However, including lags may create a correlation between the lagged dependent variable and the residuals. In this case, the lagged variables may become weak instruments. Relying only on the standard estimators in dynamic panel data is therefore inefficient. Furthermore, the errors in first differences would have AR(1) autocorrelation if the error terms "*i,t*" are serially uncorrelated.

One of the notable studies is Couderc (2005) where the author explains the procedure using Arellano and Bond (1991) difference GMM in detail. The author derived a difference GMM for α and β. First, the ν_i is eliminated by differencing the lagged ("L.") variables. By doing so, an equation that is measurable by instrumental variables is formed as follow:

$$L.CASH_{i,t} = \alpha L.CASH_{i,t-1} + \beta^t L.CASH_{i.t} + D\varepsilon_{i,t}$$

Couderc (2005) uses lagged variables on the right side of the equation as instruments. Aligned with the optimal GMM estimator requirement, the instruments are weighted by

the expected variance-covariance matrix that satisfies the orthogonality conditions. The author also suggests that this asymptotically efficient estimator considers the possible arbitrary heteroskedasticity. An AR (1) autocorrelation in the errors in first differences prevents biases in the AB estimator. However, autocorrelation may present in an AR (2) and above.

However, Arellano and Bover (1995) and Blundell and Bond (1998) highlight that lagged degrees is considered weak instruments for first differences when the regressors are continual over the period. In order minimize the possible biases, Arellano and Bover (1995) and Blundell and Bond (1998) suggest the adoption of the system GMM estimator.

4.7.2 System GMM

The dynamic panel system GMM estimator by Arellano and Bover (1995) and Blundell and Bond (1998) is employed in this study. The system GMM estimation in this analysis is based on a STATA command of xtabond2. The model is adapted based on several reasons. First, as proposed by Blundell and Bond (1998), System General Method of Moments (System GMM) is an enhanced procedure to the difference GMM. As discussed in Section 4.7.1., lagged levels are considered weak instruments for first differences. Thus there is a need to have additional moment conditions to improve efficiency. The system GMM model constructs a system consists of the in the original level equation and the first-difference transformation of it. These instruments contain a set of moment conditions which are assumed to generate consistent coefficient parameters. “In these equations in level, predetermined and endogenous variables in levels are instrumented with suitable lags of their own first differences, in order to control for firm-specific effects” (Couderc, 2005, p.10). Therefore, these lagged differences are deemed to be suitable instruments as long as the correlation between the regressors and

the firm-specific effect remain constant over the period. The authors suggest that system GMM is better in controlling the presence of lagged dependent variable in the estimated panel and thus minimises the biases related to the difference estimator.

Second, the system GMM estimators are able to address the issue of endogeneity which arises from the possible presence of endogenous regressors that were highlighted in Section 4.4 and 4.5. System GMM assumes that there the previous endogenous variables in levels are uncorrelated with the current error terms in first differences; likewise, there is no correlation between the previous variables in first differences and the error terms in levels. According to Roodman (2009), system GMM model enables additional instrumental variables in the estimation via simultaneous estimation of both levels and first differences. In this case, the lagged differences of the explanatory variables are used in the regression as instruments (Law et al., 2018). As a result, the power of hypothesis test and the efficiency of the estimator are enhanced.

The validity of analysis lies on the exogeneity of instruments and the absence of higher-order serial correlation in the idiosyncratic disturbances. To test the former, the analysis employs the Sargan-Hansen test of overidentifying restrictions and report Hansen J statistics. For the latter, Arellano-Bond test statistics for first-order and second-order serial correlation in error terms are reported. Specifically, while the analysis enables the possible presence of first-order serial correlation AR (1) in first difference transformations, the presence of second-order serial correlation AR (2) necessarily invalidates the consistency of parameter estimation in the analysis

Lastly, to improve the efficiency of parameter estimation, this study also uses two-step system GMM estimator. The model is asymptotically efficient and robust to heteroskedasticity; and arbitrary patterns of serial correlation in idiosyncratic disturbances within individuals (Windmeijer, 2005). Two-step system GMM method

controls for biases generated by endogenous regressors as well as unobserved firm-specific effects.

4.8 Cash Measurement

The main variable in this study is cash holdings. There are various ways to compute cash ratio in the past literature. The commonly used method to calculate cash ratio as documented by studies are summarized in Table 4.1. The most common cash ratio computation is by dividing the cash and cash equivalents to the book value of total assets (Cash/ Total Assets). Bates & Kahle (2009) states that this formula is widely adopted in past studies. On the other hand, alternative approach such as cash divided by net assets ratio and its logarithm may produce outliers especially for firms with a large proportion of assets in the form of cash. However, the alternative cash holdings measure can serve as robustness test.

The list of cash measurement adopted in previous literature is summarised in Table 4.1. Based on the literature review and careful analysis, the cash ratio in this study is measured using cash and cash equivalents divided by total assets. The ratio is the most commonly used in cash literature. Thus, for the purpose of replication and comparability, the said measurement is adopted in the study. In addition, alternative cash ratio computation is also used for robustness check in the study. Similar to Yung and Nafar (2014), the logarithmic values of the cash ratio is also included in the regression analysis to take into consideration the skewness of the cash holding variables.

Table 4.1: Summary of Cash Measurement

Cash Measurements	Past Studies
$\frac{Cash\ and\ Cash\ equivalents}{Total\ Assets}$	Al-Najjar, 2013, 2015; Arslan, Florackis, & Ozkan, 2006; Azmat, 2014; Bigelli & Sánchez-Vidal, 2012; Y.-R. Chen & Chuang, 2009; Y. Chen, Dou, Rhee, Truong, & Veeraraghavan, 2015; Davydova & Sokolov, 2014; Feng & Johansson, 2014; Han & Qiu, 2007; Kalcheva & Lins, 2007; Kusnadi & Wei, 2011; Kusnadi, Yang, & Zhou, 2015; Magerakis, Siriopoulos, & Tsagkanos, 2015; Marcum, 2013; Martínez-Sola, García-Teruel, & Martínez-Solano, 2013; Mikkelson & Partch, 2003; Ozkan & Ozkan, 2004; Uyar & Kuzey, 2014; Yung & Nafar, 2014; Zeng & Wang, 2015
$Log\frac{Cash\ and\ Cash\ Equivalents}{Total\ Asset}$	Belghitar & Khan, 2011; Dittmar, Mahrt-Smith, & Servaes, 2003; Fresard & Salva, 2010; Gao, Harford, & Li, 2013; Yung & Nafar, 2014
$\frac{Cash\ and\ Cash\ equivalents}{Net\ Assets}$	Cai, Zeng, Lee, & Ozkan, 2016; Chang & Noorbakhsh, 2006; N. Chen & Yang, 2016; Q. Chen, Chen, Schipper, Xu, & Xue, 2012; D'Mello, Krishnaswami, & Larkin, 2008; Dittmar et al., 2003; Schauten, van Dijk, & van der Waal, 2013; Shah & Shah, 2016; Yung & Nafar, 2014; Zeng & Wang, 2015
$Log\frac{Cash\ and\ Cash\ equivalents}{Net\ Assets}$	An, Chen, Luo, & Zhang, 2016; Y. Chen et al., 2015; Dittmar et al., 2003; Harford, Mansi, & Maxwell, 2008; Locorotondo, Dewaelheyns, & Van Hulle, 2013; Opler, Pinkowitz, Stulz, & Williamson, 1999; Orens & Reheul, 2013; Xu, Chen, Xu, & Chan, 2016; Yung & Nafar, 2014

Cash Measurements	Past Studies
$\frac{Cash + Marketable\ Securities}{Total\ Assets}$	Bigelli & Sánchez-Vidal, 2012; S. Chen, Cronqvist, Ni, & Zhang, 2017; Kim, Mauer, & Sherman, 1998; Qiu & Wan, 2015
$\frac{Cash + Marketable\ Securities}{Net\ Assets}$	D'Mello et al., 2008; Isshaq, Bokpin, & Onumah, 2009; Opler et al., 1999; Wu, Yang, & Zhou, 2016
$\frac{Cash + Short\ term\ investment}{Total\ Assets}$	Chen et al., 2015; Duchin, 2010; Fresard & Salva, 2010; Goyal & Muckley, 2013; Lee & Song, 2011; Opler & Pinkowitz, 2001
$\frac{Cash + Short\ Term\ Investments}{Net\ Assets}$.	Huang, Elkinawy, & Jain, 2013; Klasa, Maxwell, & Ortiz-Molina, 2009; Melorose, Perroy, & Careas, 2015; Ramírez & Tadesse, 2009
$\frac{Cash\ and\ Cash\ Equivalents}{Sales}$	Al-Najjar, 2015; Dittmar et al., 2003; Yung & Nafar, 2014
$Log\frac{Cash + Marketable\ Securities}{Total\ Assets}$	Fresard, 2010; Gao et al., 2013
$Log\frac{Cash + Marketable\ Securities}{Total\ Sales}$	S. Chen et al., 2017

4.9 Firm Performance Measurement

There are several approaches to measure firm performance. Previous studies documented that there are three common accounting measures of firm financial performance. They are Return on Asset (ROA), Asset Turnover and Return on Sales (ROS). In addition, performance can be measured based on market valuation such as Tobin's Q and Return on Equity (ROE).

Among the available measurement, return on assets (ROA) and return on equity (ROE) are the most adopted measurement in past business and finance studies (Brealey et al., 2010). ROA is useful as a proxy to the performance of firms. It is considered as a good indicator to reflect the firm performance over time. ROA indicates the ability of a firm to convert the available assets into the return. ROA is calculated using the net income divided by the firm's book value total assets. The formulas for ROA and ROE are presented as follows:

$$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$$

$$ROE = \frac{Net\ Income}{Total\ Equity} \times 100\%$$

Although both of the mentioned measurements are frequently employed as a proxy to firm performance in past literature, ROA is better suited in this study for two main reasons. First, past research such as Mak and Kusnadi (2005) highlighted that ROA is deemed more appropriate in measuring firm performance especially in cash holdings and corporate governance studies. In contrary to current firm value as proxied by stock prices or Tobin's Q, the firm's cash holdings or governance mechanism are not expected to adjust instantaneously. Therefore, they are not expected to influence the firm performance in the current year. Secondly, compared to other available firm performance

measurements, ROA is the more suited and adopted in hospitality research (Chen, Hou, et al., 2012; Chen, 2015; Hua, 2013; Im and Chung, 2017; Mun and Jang, 2015).

4.10 Summary

Past studies mainly employed the ordinary least squares (OLS) regression. In contrary, this study using panel regression models for data analysis. As presented in section 4.2, there are three major advantages of using panel data (Hsiao, 2003). Firstly, panel data allows greater informative data; less collinearity; and higher degrees of freedom. Secondly, panel data is able to control for firm's heterogeneity individually. Thirdly, panel data can better analyse the effects than ordinary time series or cross-sectional data. Fourthly, panel data takes into account of the adjustment dynamics. Furthermore, estimation methods such as pooled ordinary least square, random effects and fixed effects, are carried out for unbiased results.

Based on past literature, the fixed effects model is a good way to start with panel data as it provides consistent outputs (Wooldridge,2002). Despite that, the efficiency of the model is questionable. On the contrary, the random effects model is more efficient in estimating the model as it generates better p-values (Wooldridge, 2002). Thus, the random effects model is preferred given these statistical justifications. Practically, dummy variables play different roles in random effects and fixed effects models. It is considered as a fixed effects model if the dummy variables are treated as a part of the intercept. The random effects model considers dummy variables as an error term (Park, 2005). Park (2005) compare random effects and fixed effects models in Table 4.2.

Table 4.2: Comparison between Random and Fixed Effects Models

	Random Effects Model	**Fixed Effects Model**
Functions	$y_{it} = \alpha + X_{it}'\beta + (\mu_i + v_{it})$	$y_{it} = (\alpha + \mu_i) + X_{it}'\beta + v_{it}$
Error variances	Constant	Constant
Intercepts	Constant Varying across groups and time	Constant
Hypotheses test for model appropriateness over OLS	Breusch-Pagan LM test	Incremental F-test

Note: $*v_{it}$~ IID (0, δ^2); IID stands for independent identically distributed; adapted from Park (2005).

However, static panel models such as a random effect or fixed effects may not be the best-fitted model for this study. By taking into account of the issues addressed above, i.e. endogeneity issues in section 4.4, and, the dynamic nature of cash holdings in section 4.6, this study adopts the dynamic panel system GMM estimators. By enabling for possible delays in the cash holdings adjustments, the dynamic nature of cash holding decisions can be focused. Furthermore, a dynamic panel data estimation is used to test if companies behave as if they are adjusting to an implicit target cash level or otherwise. It is crucial to determine the changes in the cash holdings of the firm due to a partial adjustment. According to Ozkan and Ozkan (2004), the decisions in the past are used to predict the future levels of cash.

CHAPTER 5: DETERMINANTS OF CORPORATE CASH HOLDINGS: INSIGHTS FROM HOSPITALITY FIRMS IN AN EMERGING MARKET

5.1 Introduction

Corporate cash holdings constitute an essential area in the literature. The empirical studies on the determinants of corporate cash holding gained growing interest in recent years. This growth is driven by the observed increasing trend of firms hoarding unusually high level of cash. There is a substantial upward trend observed among firms around the world in recent years. Non-financial firms maintain a sizable portion of their assets as cash. Bates and Kahle (2009) find that firms in the United States (US) doubled their cash holdings in the past three decades. US corporations have been holding a record-high amount of cash between 1995 and 2010, with an annual growth rate of 10% (Mun and Jang, 2015). According to Gao et al. (2013), listed firms in the US hold a mean value of 20.45% of assets in cash in the year 2011. Cash holdings among non-financial firms in the US alone increased to a record $1.7 trillion in mid-2016 (Platt, 2016).

The increasing trend in corporate cash holdings is not confined to the US. Iskandar-Datta and Jia (2012) revealed that the trend has spread to other large industrialised countries such as US, Canada, UK, Germany, France, Japan. A similar trend is also observed in Asia. As published by The Economist (2014), large cash holdings amounted to 44% and 34% of GDP are observed in Japanese and South Korean firms respectively. Companies hold ¥229 trillion ($2.1 trillion) of cash in Japan, while South Korean firms hold 459 trillion won ($440 billion). The figures are staggering compares with cash holdings of 11% of GDP, or $1.9 trillion, reported in the US firms. Cash thus represents a substantial portion of an asset for firms.

It is evident that companies choose to hold more cash across industries in recent years. Opler et al. (1999) were among the pioneers to investigate the determinants of cash

holdings. Some of the past studies include: industrial firms (Bates and Kahle, 2009; Kim et al., 1998; Opler and Pinkowitz, 2001); insurance (Hsu et al., 2015); high tech firms (Booth and Zhou, 2013; Chen, 2008); REITs (Hardin et al., 2009); and, inter-industries (Opler et al., 1999; Ozkan and Ozkan, 2004). However, the upward trend in corporate cash holdings is not pervasive across all industries. Unlike other sectors, the hospitality industry has not shown a similar upsurge in cash holdings over the same period despite the observed increase cash holding levels in recent years. Nonetheless, the hospitality industry is one of the industries which have lower reserves of cash holdings including in emerging market such as Malaysia. Even though the unusual trend of holding a low level of cash reserves in the hospitality industry is observed, there is only handful of researches done. The tendency to avoid large cash balances in hospitality industry thus raises important research questions.

We join a recent surge of papers using data on hospitality firms to draw new insights into corporate cash holdings behaviour. Among the few hospitality literatures is Koh and Jang (2011) which study the determinants of cash holdings in public listed hotel companies in the US. The findings show that hotel firms recorded mean cash levels between 8.6% and 8.8% of assets. In a similar vein, Morais and Silva (2013) study the cash level in lodging firms in Southern Europe such as Greece, Italy, Spain, and Portugal. The average of cash holdings among the hotel firms is below the average of all other industries from 2003 to 2011. In addition to lodging firms, Kim et al. (2011) study a sample of 125 publicly listed restaurants in the US. They reported that the average cash ratio is 0.0839 in the US between 1997 and 2008.

While the recent hospitality literature has undoubtedly contributed to our knowledge, these studies tend to analyse the determinants in an isolated way empirically. Previous studies tend to focus solely on either hotels or restaurants and not hospitality as a whole.

Comparison between hospitality firms with non-hospitality firms was not empirically tested. Therefore, it remains unclear if there are any differences when examined simultaneously with other non-hospitality firms.

In addition, existing empirical literature mainly refers to US-listed companies. Little attention has been given to the determinants of cash holdings in hospitality firms especially in the context of emerging market. We provide one of the first comparisons of cash holdings behaviour between hospitality and non-hospitality firms in an emerging market. By identifying the key factors of cash holdings for each group, we can attribute the differences in higher agency costs in non-hospitality firms. This paper distinguishes itself from the existing cash literature by examining the determinants of cash holdings in the context of emerging market. Emerging markets often have unsophisticated and underdeveloped capital markets which make external financing difficult. As a result, firms in emerging market might tend to hold more cash than those in developed markets. It is thus insightful to study the link between cash holdings and firm characteristics in an emerging market. Malaysia is of particular interest, as it is one of the fast-growing emerging markets. It was recognised by the FTSE as one of the advanced emerging markets since 2011 (Wassiuzaman, 2015). Also, the firm structure in Malaysia differs from those of most developed countries. Family firms are a common business feature and predominate in Malaysia. Past literature has also reported that there is a propensity of controlling shareholders to expropriate minority through high levels of cash holdings (Liu et al., 2015).

5.2 Unique characteristics of hospitality firms

Several attributes of hospitality firms may explain the puzzle of unusual cash holding phenomenon. Past studies show that hospitality firms differ with other firms regarding investment and financing policies (Oak and Iyengar, 2009). The unique corporate governance structures and agency problems in hospitality firms may contribute to such behaviour.

Hospitality firms such as restaurants had been characterised as a business that experiences cyclical patterns and strong seasonality (Choi et al., 2007; Upneja and Dalbor, 1986). They operate in a highly competitive and saturated market in which financial and operational risks are high (Kim et al., 2011). Furthemore, Pizam and Shani (2009) compare hospitality firms with manufacturing companies regarding labour and capital intensity. They argue that hospitality firms are labour-intensive compared to other firms such as manufacturing. In addition, hospitality firms tend to invest significantly in real estate and fixed assets which are highly illiquid as compared to firms in other industries (Bharwani and Mathews, 2012). Thus, hospitality firms are susceptible to volatile macroeconomic factors and financial environment. Firms may face challenges in dealing with the changes efficiently. Moreover, hospitality firms are also subject to interest rate risk as companies have high debts (Jang, Tang, and Chen, 2008).

Besides, hospitality firms are exposed to seasonality and high volatility in operating cash flows (Hsu and Jang, 2008; Pegg, Patterson, and Gariddo, 2012; Scott and McBoyle, 2007). Financially constrained firms may leave with no options, but to use the external financing to fulfil operational and investment needs due to the variability of internal cash flows. In some cases, firms may have to forgo opportunities as a result of high costs of capital. Therefore, cash management is essential for hospitality firms during good times and even more so during uncertain economic conditions.

This study intends to narrow the gap in the current literature on corporate cash holdings by tackling the question based on the hospitality industry perspective suggested Jang et al., (2011) and Park and Jang (2014). In response to the calling, we included hospitality firms which are publicly listed on Bursa Malaysia and compared cash holdings behaviours with non-hospitality firms from the year 2002 to 2013. This study contributes to the literature by investigating the financial determinants of corporate cash holdings in hospitality firms in Malaysia. A comparative study of hospitality and non-hospitality firms are conducted. This study allows further examination of corporate cash holdings across industries with various institutional frameworks.

The remainder of this chapter is organised as follows. 5.4 presents a brief literature review and formulation of research hypotheses. The section is followed by Section 5.5 where the detailed methodology adopted in this study is shown. Empirical results and discussion are discussed in Section 5.6. Finally, Section 5.6.4 concludes the study and indicates its theoretical and practical implications.

5.3 Tourism Crises and its Impact on Hospitality Industry

Since the mid-1990s, South East Asia has experienced some crises triggered by various events. The hospitality industry is exposed to a broad range of macro-environmental factors extraneous to an organization such as 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. The impact from such events are predominantly beyond the control of the firms and result in significant adverse effects toward the performance of hospitality firms. (Chen, Jang, & Kim, 2007; Chen, Kim, & Kim, 2005; Mat Som, Ooi, & Hooy, 2014; McAleer, Huang, Kuo, Chen, & Chang, 2010; Song, Lin, Witt, & Zhang, 2011).

Apart from external shocks and tourism crisis, hospitality firms need to ensure their capability to respond promptly to also faces challenges arises from financial risks as well. Past literature highlight that hospitality firms behave differently from other firms regarding structural characteristics (Singal, 2015); financing and investment issues (Jang et al., 2008; Moon and Sharma, 2014); and, corporate governance (Oak and Iyengar, 2009). Hospitality organizations have substantial investments in illiquid assets such as real estate and fixed assets. Maintaining sufficient internal cash flows are therefore vital for business resilience and survival for hospitality firms (Bharwani and Mathews, 2012; Defranco and Schmidgall, 1998; Jang et al., 2011). Optimal allocation of cash as a buffer against future uncertainty is an essential decision a firm need to make.

Keynes (1936) highlighted two main advantages of cash holdings. Firstly, firms may cut down transaction costs by opting cash payments without assets liquidation (Han & Qiu, (2007). Cash is an essential part of a firm's assets where it provides liquidity to firms. Secondly, a firm hold cash for precautionary motive. Cash may be used as a hedging tool against the future cash shortfalls exposure (Han and Qiu, 2007; Kim et al., 2011; Lins et

al., 2010; Palazzo, 2012). Cash provides financial flexibility when financial markets are in a state of turmoil (Smith, 2014). Cash serves as a cushion against unexpected shocks and to avoid high capital costs (Opler et al., 1999; Ozkan and Ozkan, 2004). Therefore, maintaining a significant amount of cash help firms to avoid such circumstances and make cash holdings valuable to shareholders.

However, a firm's degree of cash holdings not only has both beneficial but also detrimental effects. Although cash provides liquidity, it is also the asset which is the least productive and the one generates small or, in general, no financial returns. The main risk for businesses holding too much cash is that insiders can turn cash into private benefits (Fresard and Salva, 2010). The agency theory states that conflict between managers and investors lies at the heart of corporate cash holding policy (Jensen & Meckling, 1976; Jensen, 1986). In this vein, managers try to build up cash levels to liberate themselves from the watchful eyes of creditors. Therefore, piling up cash beyond a reasonable level could dampen the value of the firm and, hence, its stock (Dittmar and Mahrt-Smith, 2007; Fresard, 2010; Kalcheva and Lins, 2007; Masulis et al., 2009). Thus, cash holdings are a vital issue for the hospitality industry.

Although cash management is an integral part of financial risk management in many industries, there were limited insights from the hospitality industry. Also, mainstream corporate finance research focuses on the effect of internal, rather than the external factors on firms' cash holdings behaviours. To date, the minimal research investigates the impact of the crisis on cash holdings despite the manifestation of risks to a firm during shocks and the well-recognized importance of liquidity. Majority of the literature emphasizes more on managerially controllable variables. Although informative, these studies fall short of delineating a holistic view of corporate cash holdings, especially in emerging markets. The impacts of external shocks such as tourism crises on corporate cash holdings

are often omitted in the existing literature. Therefore, existing literature may constitute a significant shortcoming since the external environment in emerging markets varies from the developed ones (De Clercq et al., 2010). Ignoring external environments in examining the determinants of cash holdings thus limit the understanding of corporate cash policy. Despite its significance, it is surprising to find that only a handful of research focuses on the impact of the crisis on corporate decisions such as cash holdings. Among the few recent studies which link crisis and corporate cash holdings are Chen and Chang (2013) and Álvarez et al. (2012). Although both studies focus on emerging markets, the studies only focus mainly on financial crisis and industry in general.

The extent to which external shocks affects corporate cash holdings in hospitality firms remain ambiguous. This study intends to narrow the gap in the current literature on corporate cash holdings by tackling the question based on the hospitality industry perspective suggested Jang et al., (2011) and Park & Jang (2014). In response to the calling, we included hospitality firms which are publicly listed on Bursa Malaysia and compared cash holdings behaviours with non-hospitality firms from the year 2002 to 2013. The main contribution of this paper is to shed light on how tourism crisis affects corporate cash holdings in the context of hospitality firms in emerging market. Unlike the recent studies, we attempt to reveal the effect of not only on the financial crisis but also the non-financial perspective of tourism crisis on cash holdings.

5.4 Literature Review and Hypotheses Development

There are several variables which are related to the determinants of cash holdings. The expected relationships between these variables and cash holdings are discussed as following and then summarised in Table 5.1.

Table 5.1: Variables measurement and theoretical predictions

Variable	Variable name	Measurement	Pecking Order Theory	Trade-off Theory
Financial Variables				
Size	SIZE	Natural logarithm of total assets	+	-
Cash flow	CF	(Earnings before tax + depreciation & amortization) / Total assets	+	-
Growth opportunities	GRO	Market to book ratio	+	+
Leverage	LEV	Total liabilities/ Total assets	+/-	+/-
Dividend	DIV	Dummy variable: 1- if dividend is paid; 0= if dividend is not paid	+/-	-
Cash Flow Variability	VAR	the standard deviation of the first difference of OCF for the previous three years	-	+
Capital expenditures	CAPEX	Total capital expenditures	-	+
Liquidity asset substitutes	LIQ	(Current assets- current liabilities- cash & equivalents)/ Total assets.		-

5.4.1 Growth opportunities

For firms having high growth opportunities, it is imperative that they have enough funds to exploit these opportunities. They do not want to forgo these promising investments, so they ought to hold liquid assets to be sure to have the necessary funds available when investment opportunities arise. Thus, firms with more or better growth opportunities tend to keep higher cash balances to prevent losing valuable investment opportunities due to a shortage of funds. Also, these cash balances are more highly valued by investors, in anticipation of future growth (Opler et al., 1999).

Growth opportunities are also linked to the costs of agency costs resulted from the conflicts of interest between shareholders and debtholders. With higher growth opportunities, firms are expected to engage in more project and investment opportunities. Firms will have to find means to finance the given opportunities. However, external financing is costly in the presence of higher expected agency costs. Thus, higher cash levels are needed especially when the cost of external financing from outside sources is expensive due to asymmetric information. Based on the discussion, it is expected that the relationship between cash-holding and growth opportunities is positive.

Hypothesis 1: There is a positive relationship between growth opportunities and cash holdings.

5.4.2 Firm size

Previous studies in cash holding highlighted the vital role of firm size. Transaction cost models demonstrate that the economies of scale exist in cash management (Baumol, 1952). Larger firms have better access to financial markets in general. However, smaller firms not only face higher constraints in borrowing but also prone to financial distress because of severe information asymmetries (Fazzari et al., 1988; Kim et al., 1998). Therefore, smaller firms are expected to hold more cash due to costly external financing. However, larger firms are considered to be more diversified. The managers in large firms thus have better flexibility in financial policies and less prone to bankruptcy (Al-Najjar, 2011). In turn, the cash levels are higher in such firms.

Ozkan and Ozkan (2004) argue that size of a firm may serve as a proxy for information asymmetry. Lesser information asymmetries provide easier access to financing. It also allows greater diversification of activities for bigger companies. Hence, cash holdings are expected to be small for bigger firms. Several studies confirmed a negative effect of firm size on cash holdings, measuring firm size both using assets (Gao et al., 2013; Opler et al., 1999). Accordingly, the relationship between cash holdings and firm size are expected to be negative. Company size (SIZE) is measured by the natural logarithm of total assets.

Hypothesis 1: There is a negative association between firm size and cash holdings.

5.4.3 Cash flow

Kim et al. (1998) postulate that cash flows serve as a replacement for cash. Based on this perspective, firms with higher cash flows tend to maintain lesser cash. The need to hold high levels of cash reduced if a firm has sufficient cash flow. Having cash flow provides a ready source of liquidity (Ferreira and Vilela, 2004; Kim et al., 1998). A negative relationship is predicted between the cash flow and level of cash holdings of a firm based on the Trade-off theory. On the other hand, we expect a positive relationship based on the pecking order theory. Firms with higher cash flow are more likely to hold most of their assets in the form of cash (Ferreira and Vilela, 2004). Firms use liquid reserves to fund new investments. Therefore, higher cash flows will lead to higher liquid reserves as the firms need that as the primary source of financing (Deloof, 2003; Martínez-Sola et al., 2013). This is called the financing motive for holding cash. Besides, the tendency to maintain a high level of cash can also be driven by precautionary motive (Deloof, 2003).

The earnings before interest and taxes (EBIT) is added with depreciation and amortisation minus with interest expenses, tax and ordinary dividends to measure operating cash flow, It is then divided by the total assets (Hill et al., 2013). As the prediction based on Trade-off Theory and Pecking Order Theory is contradicted to each other, the expected relationship between cash flow and cash holdings remain inconclusive. The hypothesis on the expected impact of cash flow on cash holdings is therefore formulated as follow.

Hypothesis 3: There is a positive association between cash flow and cash holdings.

5.4.4 Cash flow variability

The Trade-off theory states that firms with more volatile cash flows would accumulate more cash as a precautionary measure (Miller and Orr, 1966). The more volatile the firm's cash flows, the higher the tendency that the cash flows are inadequate to meet its financial obligations (Opler et al., 1999). Hence, we expect that cash flow uncertainty is positively related to corporate cash holdings. There is a need to maintain a higher level of cash as the firms are exposed to a higher frequency of cash flow shortages.

Han and Qiu (2007) found a positive relationship between cash flow variability and the cash holdings. Firms tend to increase their cash holdings as there is an increase in cash flow variability, mainly if the firm is financially constrained. Interestingly, no such relationship was found for unconstrained firms. This difference is probably due to the precautionary motive for holding cash. Financially constrained firms are firms that cannot fund all positive NPV projects, because of borrowing constraints. Hence, they need to keep a buffer, since otherwise, they would have to forego promising investment opportunities. Unconstrained firms have better access to external financing and thus don't need precautionary cash holdings that much. This study, therefore, hypothesises a positive effect of cash flow variability on the level of cash holdings.

Hypothesis 4: There is a positive association between cash flow variability and cash holdings.

5.4.5 Liquid asset substitutes

Firms may have some other liquid assets as a replacement for cash. For example, net working capital serves as an alternative to cash regarding liquidity. When a firm already has a lot of liquid assets other than cash, the need for large cash holdings goes down. When substitutes for cash are already abundantly in place, the call for cash holdings is weakened.

Liquidity is most often measured as net working capital. The net working capital is measured by current assets minus current liabilities divided by total assets. It thus measures the size of liquid assets, excluding cash. Several studies have confirmed the negative effect of liquidity on cash holdings (D'Mello et al., 2008; Ozkan and Ozkan, 2004).

Trade-off theory predicts a negative relationship between liquid asset substitutes and cash holdings (Al-Najjar, 2011; Ozkan and Ozkan, 2004). This is due to the convertibility of liquid assets other than cash into cash. Thus, a negative relationship between asset liquidity and cash holdings is expected. The following hypothesis is formulated:

Hypothesis 5: There is a negative relationship between asset liquidity and cash holdings.

5.4.6 Leverage

Just like the presence of liquid assets other than cash, leverage may substitute for cash holdings too. It is an alternative way of funding. If leverage is already high, additional cash holdings may be redundant. A negative association between leverage and cash holdings would is expected.

Another issue is the persistence of leverage policy. Leverage reflects the past financing behaviour of the firm, which is likely to persist in the future. Firms that are currently highly levered have experience in taking on loans and may also have a good credit rating. Therefore, these firms have a good bargaining position when negotiating new debt contracts. Hence, firms having large amounts of debt are more likely to issue debt in the future, so that large cash holdings are unnecessary.

One could also argue that higher leverage increases the possibility of financial distress. Firms with high leverage may want to make up for this by taking on additional precautionary cash. High leveraged firms are subject to the discipline and monitoring of the financial markets. Thus, less leveraged firms tend to accumulate more cash.

Following this reasoning, leverage and cash holdings should be positively related. However, leverage is measured using the ratio of debt to sales. Based on the previous empirical findings and the trade-off theory, the following hypothesis is thus formulated.

Hypothesis 6: There is a negative relationship between leverage and cash holdings.

5.4.7 Capital expenditure

Capital expenditures (CAPEX) represent cash outflows to the firm. Firms with large capital expenditures are firms making large investments. All other investments are just costs to the firm, so it is not reasonable that firms stockpile cash to fund capital expenditures. Therefore, firms are not expected to hold a buffer of liquid assets when facing large capital expenditures. Based on the pecking order theory, their cash holdings will be smaller, because CAPEX is being paid using internal funds. Firms with large capital expenditures will first draw down their cash holdings before addressing external financing. These firms spend money, rather than stockpile it. Thus, a negative relationship between the two is expected.

Past literature finds that capital expenditures increase a firm's borrowing capacity. By employing assets as collateral, the firm's needs for cash reserves can be lessened. Moreover, as productivity shocks that caused an increase in investments may result in lower level of cash (Riddick and Whited 2009). Therefore, capital expenditure is expected to be negatively related to cash holdings.

Hypothesis 7: There is a negative relationship between capital expenditure and cash holdings.

5.4.8 Dividend

Paying dividends reduces cash holdings directly because pay-outs are a cash outflow to the firm. The higher the dividends are, the less cash is available to stockpile. On the other hand, a dividend-paying firm can easily raise additional funds by cutting the dividend. Therefore, dividend pay-out is negatively correlated with cash holdings (Gao et al., 2013; Opler et al., 1999; Subramaniam et al., 2011).

By reducing dividends pay out or disposing of non-financial assets, financially constrained firms can increase cash balances. In addition, dividends may also serve as a proxy for financial soundness. For instance, Almeida et al., (2004) consider firms with no dividend pay-out as financially constrained. Besides, firms which pay dividend enjoy external financing at a lower cost due to better track record. Therefore, dividend payment status needs to be treated with due diligence as it would signal the public on the firm's condition. Besides, a negative effect of dividend on liquid corporate assets is expected.

Hypothesis 8: There is a relationship between dividends and cash holdings.

5.5 Methodology

5.5.1 Sample and data

The sample in this study comprises of listed hospitality firms on the Bursa Malaysia during 2002 to 2013. Although the analysis is from the year 2002 to 2013, the dataset used in this study is from the year 1999 to 2013 due to the requirements of the model, i.e., lag and lead values. All data were gathered from Datastream International Database and the ISI Emerging Markets Database from EMIS. The sample for testing the hypotheses is selected based on the criteria where all firms are listed on Bursa Malaysia. The reason only listed firms were chosen is primarily due to the reliability and availability of the financial statements.

The sample was drawn from 22 hospitality firms listed on the Bursa Malaysia. The hospitality firms are identified using the North American Industrial Classification System (NAICS) code available in EMIS database: Arts, Entertainment and Recreation (71), Accommodation (721), Accommodation and Food Services (72), Food Services and Drinking Places (722). Only non-financial firms are included in the study. Firm-years with insufficient data are omitted from the sample. For instance, companies which do not have data starting from the year 1999 are excluded from the data required for computation of variability of cash flow which equals to the standard deviation of cash flows for at least past three years are missing. After removing companies with insufficient data to estimate the dependent and independent variables and after adjusting for outliers, the sample comprises of 19 companies.

A comparative study was conducted to test if there are any significant differences between hospitality and non-hospitality firms. Thus, a sample of non-hospitality firms was drawn. All firms listed on the Main Board of the Bursa Malaysia which have complete data from 1999 to 2013 are considered. The finance and regulated sectors are

exempted from the study because these firms are highly regulated and must maintain a certain level of cash as part of their regulatory compliance. Therefore, the result of this research would be affected. Industries such as the technology and mining which have less than ten firms are excluded. It is due to incomplete data. The final sample consists of 1176 observation. Of these, 948 observations belong to the non-hospitality industry and 228 hospitality firms.

5.5.2 Definition and Typologies of Tourism Crises

The hospitality industry has been challenged by a wide range of crisis. Crisis and disaster are terms which are often used interchangeably in crisis management literature (Ghaderi et al., 2012; Kim & Lee, 1998). To develop appropriate managerial responses to cope with crisis effectively, understanding of the nature of the crisis is essential. Some researchers have coined the term typologies of crises which are helpful in devising management decision and policy formulation (Evans and Elphick, 2005).

As documented by Ghaderi et al. (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.

5.5.3 Variable Measurement

The summary of variable measurement is presented in Table 5.2.

Table 5.2 Summary of Variables Measurement

Variable		Description
Dependent Variable		
Cash ratio	CASH	Cash & Cash equivalent)/ Total Assets
Independent Variables		
Growth opportunities	GRO	Market to book ratio
Firm size	SIZE	Natural logarithm of total assets
Cash flow	CF	(Earnings before tax + depreciation & amortization) / Total assets
Cash Flow Variability	VAR	the standard deviation of the first difference of OCF for the previous three years
Leverage	LEV	Total liabilities/ Total assets
Liquidity asset substitutes	LIQ	(Current assets- current liabilities- cash & equivalents)/ Total assets.
Capital expenditures	CAPEX	Total capital expenditures
Dividend	DIV	Dummy variable: 1- if dividend is paid; 0= if dividend is not paid

Table 5.3: Comparison of Cash Ratio (Year 2002 to 2013)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hospitality	0.0541	0.0628	0.0919	0.0701	0.0684	0.106	0.114	0.103	0.101	0.0951	0.109	0.0995
Non-Hospitality	0.104	0.0885	0.0968	0.118	0.106	0.124	0.118	0.125	0.139	0.13	0.128	0.117

5.5.4 Research models

Similar to Bigelli and Sánchez-Vidal (2012), we assume cash holdings is not adjusted immediately following the changes in the explanatory variables of cash holdings. Following Ozkan and Ozkan (2004), each of the *i*th company has an optimal cash level at year *t*, the function of the explanatory variables x_k, and an error term μ, i.e.:

$$Cash_{it}^{*} = \alpha + \sum_{k} \beta_k x_{kit} + \mu_{it} \tag{1}$$

$$Cash_{it} - Cash_{it-1} = \lambda(Cash_{it}^{*} - Cash_{it-1}) \tag{2}$$

Where λ indicates the proportion of the adjustment to the optimal level which range from 0 to 1. When λ equals to 1, the firm adjusts immediately. On the other hand, a value of 0 indicates that it is not efficient for firms to adjust its cash level due to high adjustment costs. To study the relationship between the identified variables and cash holdings, the determinants identified in the model by Opler et al. (1999) is adopted.

$$CASH_{it} = \delta_0 + \delta_1 CASH_{it-1} + \delta_2 GRO_{it} + \delta_3 SIZE_{it} + \delta_4 CF_{it} + \delta_5 VAR_{it} + \delta_6 LEV_{it} + \delta_7 LIQ_{it} + \delta_8 CAPEX_{it} + \delta_9 DIV_{it} + \eta_i + \varphi_t + \varepsilon_{it} \tag{3}$$

Where: $\delta_0 = \alpha\lambda$; $\delta_1 = 1 - \lambda$; $\delta_k = \lambda\beta_k$; $\varepsilon_{it} = \lambda\mu_{it}$

The equation (3) is obtained by substituting Equation (1) into Equation (2). φ_t represents the year dummy variables which reflect the impact of macroeconomic variables that are common to all firms in a given year. $\eta_i$indicates the unobservable time-invariant characteristics of each company which could affect the level of cash holdings. Both φ_t and η_i could affect their level of cash holdings and were added in equation (3). Since the lagged dependent variable are included in this adjustment model, both $CASH_{i,t}$ and $CASH_{i,t-1}$ are likely to be correlated with the η_i term that does not vary through time implying that an ordinary least squares estimator is biased and inconsistent. Furthermore, another source of bias may arise from possible endogeneity problems due to shocks that jointly impact the cash ratio and the exogenous variables and omitted variables bias. To address this problem, we follow Bigelli and Sánchez-Vidal (2012) and Guizani, (2017) to estimate the model by using instrumental variable estimators. We adopted the General Method of Moments (GMM) developed by Arellano and Bond (1991). Unlike other static panel model, GMM offers better parameter estimates. It uses the instruments that are acquired from the orthogonality conditions that present between the lagged values of the variables and disturbances terms (Arellano and Bond, 1991). The methodology assumes that there is no second-order serial correlation when lagged variables is used as instruments. Thus, the Arellano and Bond is included to test for the absence of second-order serial correlation. Furthermore, as introduced in the context of GMM by Hansen (1982), we test for the absence of correlation between the instruments and the error term with the test of overidentifying restrictions.

Following Chen & Chang (2013), the indirect effect of the crisis on corporate cash holdings are examined through the channel of growth opportunities, profitability and investment demand, as shown in equation 4 to equation 6. The present study also examined the indirect effect of the crisis on corporate liquidity through the channels of growth opportunities, profitability, and investment demand (Dittmar et al. 2003), that is, how the sensitivities of corporate liquidity to these variables vary in crisis. The GRO, CAPEX, and CF were used to measure growth opportunities, investment demand and profitability respectively. The interaction variables were created by multiplying GRO, CAPEX by CRISIS dummy. To mitigate the multicollinearity problem and to observe clearly whether the sensitivities of corporate liquidity to these three variables increased after the crisis, the indirect effect of the crisis on corporate liquidity was examined through only one of these three variables at a time.

Cash sensitivity to GRO:

$$CASH_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CF_{it} + \beta_3 GRO_{it} + \beta_4 LEV_{it} + \beta_5 DIV_{it} + \beta_6 CAPEX_{it} + \beta_7 LIQ_{it} + \beta_8 STDEBT_{it} + \beta_9 NWC_{it} + \beta_{10} CRISIS_{it} * GRO + \alpha_t + u_{it} \quad (4)$$

Cash sensitivity to CAPEX:

$$CASH_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CF_{it} + \beta_3 GRO_{it} + \beta_4 LEV_{it} + \beta_5 DIV_{it} + \beta_6 CAPEX_{it} + \beta_7 LIQ_{it} + \beta_8 STDEBT_{it} + \beta_9 NWC_{it} + \beta_{10} CRISIS_{it} * CAPEX + \alpha_t + u_{it} \quad (5)$$

Cash sensitivity to CF:

$$CASH_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CF_{it} + \beta_3 GRO_{it} + \beta_4 LEV_{it} + \beta_5 DIV_{it} + \beta_6 CAPEX_{it} + \beta_7 LIQ_{it} + \beta_8 STDEBT_{it} + \beta_9 NWC_{it} + \beta_{10} CRISIS_{it} * CF + \alpha_t + u_{it} \quad (6)$$

5.6 Results and Discussion

5.6.1 Descriptive analysis

For all 1067 observation in the sample, Table 5.3 shows the changes in the mean proportion of cash ratio by the hospitality and non-hospitality firms along the sample years. Consistent with prior literature, hospitality firms held less cash compared to non-hospitality firms. The figures show that there is an upward trend of cash observed among Malaysian firms in the 2002 to 2013 period. It is similar to the findings by Bates and Kahle (2009) for US public firms. The mean cash holdings represent about 9.95% (11.7%) of total assets in 2013 compared to 5.41% (10.4%) in the year 2002 in hospitality firms (non-hospitality firms).

Table 5.4 shows the summary statistic for the major variables tested in the analysis. The average cash for Malaysia public listed firms is recorded at an average 11.2% of total assets. Consistent with past studies, the figures range between 8 to 12% level which was found among public companies in the US (D'Mello et al., 2008; Fritz Foley et al., 2007; Kim et al., 1998). The median of cash holdings for Malaysian firms equals 8.23% of total assets. The median values found is lower compared to those which were documented by Ferreira and Vilela (2004) and Ozkan and Ozkan (2004). Previous studies recorded 9.1% and 5.9% for EMU and UK listed firms respectively. Median values are below the average in hospitality firms as presented in Table 5.4. Fewer cash holdings seem to be held by hospitality firms (where the mean and median values are 9.05% and 6.77% respectively), and non-hospitality firms (where the mean and median values are 11.9% and 8.64% respectively). The two- sample t-test and Wilcoxon-test both reject the null that cash holdings in non-hospitality firms are the same as that in hospitality firms at the 1% level. Overall, the results support the hypothesis that non-hospitality firms tend to hold more cash than hospitality firms. On average, cash holdings in non-hospitality firms are

approximately 32% more than hospitality firms. This variation between the firms indicates that industry is likely an essential driver of cash holdings.

Table 5.4 Description of exogeneous variables

	Variable	mean	p25	Median	p75	SD
Non-hospitality	cash	0.118***	0.0458	0.0864***	0.150	0.112
	gro	0.818***	0.360	0.610***	1.030	0.773
	size	5.752***	4.506	5.448***	6.939	1.649
	cf	0.0519***	0.0085	0.0475***	0.0916	0.0977
	var	0.129	0.0110	0.0240	0.0413	1.441
	lev	0.451	0.290	0.447	0.587	0.224
	liq	0.0559***	-0.0553	0.0328***	0.177	0.216
	capex	0.0541***	0.00951	0.0278***	0.0745	0.0847
	div	0.801*	1	1	1	0.400
Hospitality	cash	0.0905***	0.0292	0.0677***	0.128	0.0813
	gro	0.550***	0.240	0.400***	0.680	0.467
	size	6.219***	4.996	6.302***	7.204	1.525
	cf	0.0158***	-0.00833	0.0194***	0.0411	0.0700
	var	0.0344	0.0112	0.0238	0.0427	0.0387
	lev	0.430	0.285	0.434	0.558	0.190
	liq	-0.0179***	-0.0776	-0.0110***	0.0569	0.117
	capex	0.0362***	0.00618	0.0149***	0.0379	0.0733
	div	0.745*	0	1	1	0.437
Total	cash	0.112***	0.0419	0.0823***	0.145	0.107
	gro	0.764***	0.320	0.570***	0.970	0.730
	size	5.847***	4.554	5.643***	7.041	1.635
	cf	0.0446***	0.00497	0.0379***	0.0876	0.0939
	var	0.110	0.0110	0.0240	0.0415	1.284
	lev	0.447	0.289	0.444	0.581	0.217
	liq	0.0410***	-0.0588	0.0191***	0.145	0.202
	capex	0.0505***	0.00821	0.0244***	0.0665	0.0828
	div	0.790*	1	1	1	0.408

Test statistics of the t-test and the Wilcoxon-test of differences in cash holdings and firm characteristics between non-hospitality firms and hospitality firms are given in superscript. ***,** and * denoting statistical significance at the 1%, 5% and 10% levels, respectively.

5.6.2 Correlation analysis

Table 5.5 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.

5.6.3 Determinants of cash holdings

Majority of the corporate decisions are endogenously determined, either simultaneously or contemporaneously. Therefore, endogeneity problem has been widely discussed in past studies. Similar to Chen (2008) and Ozkan and Ozkan (2004), we thus perform both static panel and dynamic panel estimations to mitigate the potential endogeneity problem.

We test the formulated hypotheses in section 5.4 by using the pooled regression analysis. In addition, diagnostic testing was performed, and there was no multicollinearity. The results are shown in 3 columns. Column 1 presents the static model in Equation 1 using the OLS technique with standard errors. The second column summarises the results from the fixed effects model. The inclusion of the fixed effects should alleviate the influence of the related variables if the coefficients of the relationship measurements happen due to an omitted firm-specific factor. The last column re-estimated the model using the Fama-MacBeth model. We use this approach to estimate a cross-sectional regression for each year. This method is more effective because it treats each year as an independent cross-section. Besides, it also helps overcome the serial correlation problem in the residuals of cross-sectional regressions.

Table 5.5: Correlation Matrix

HOSPITALITY FIRMS										
	cash	gro	size	cf	var	lev	liq	capex	div	VIF
cash	1									
gro	0.261***	1								1.29
size	-0.437***	0.161**	1							1.38
cf	0.190***	0.419***	0.270***	1						1.54
var	0.0651	0.00134	-0.210***	-0.0603	1					1.16
lev	-0.0511	-0.283***	0.241***	-0.283***	0.0192	1				1.34
liq	-0.310***	0.157**	0.0402	0.204***	-0.102	-0.202***	1			1.09
capex	-0.146**	-0.0280	-0.174**	-0.0505	0.0732	-0.0478	0.0215	1		1.03
div	0.250***	0.174**	0.313***	0.363***	-0.315***	-0.0910	0.0260	-0.134**	1	1.34
NON-HOSPITALITY FIRMS										
	cash	gro	size	cf	var	lev	liq	capex	div	VIF
cash	1									
gro	0.162***	1								1.17
size	-0.0427	0.117***	1							1.27
cf	0.245***	0.227***	-0.120***	1						1.39
var	0.0537	-0.000991	-0.0748**	0.0552	1					1.03
lev	-0.237***	-0.178***	0.310***	-0.367***	-0.0302	1				1.6
liq	-0.0689**	0.0282	-0.286***	0.264***	0.0989***	-0.516***	1			1.51
capex	0.100***	0.154***	-0.0178	0.0659*	-0.0212	0.00942	-0.157***	1		1.08
div	0.00644	0.0533	0.242***	0.165***	-0.103***	-0.0512	-0.000606	-0.0871**	1	1.13

While the fixed effects regressions control for firm heterogeneity and time factors, the regressions may be affected by potential endogeneity. Also, there is ample evidence that firms have implicit target levels of cash holdings (Opler et al., 1999; Ozkan and Ozkan, 2004), which can be modelled by taking one-period lag of the dependent variable among the independent variables. However, estimating such a model using fixed-effects regression leads to inefficient and inconsistent standard errors as there is a link between the lagged dependent variable and standard errors (Nickell 1981). Therefore, we estimated the model in Equation 3 with a system GMM model of (Blundell and Bond, 1998) as shown in Table 5.6 and illustrated in the following section. Two-step system GMM were performed, and the results are presented in the said table.

Table 5.7 shows the results of the determinants of cash holdings based on GMM regressions. Two-stage GMM estimator is used for all estimations. According to Blundell and Bond (1998), two-stage GMM is preferred over one-stage as it is more efficient. Residuals from one-stage estimation are used to construct an asymptotically weighted optimum matrix in two-stage GMM. Hansen test is carried out, and the instrument is valid. Second-order serial correlation is not present in all the three models thus confirming consistent estimations. The lagged dependent variable is significant on all models. This implies that the dynamic GMM is a suitable estimator. Therefore, the empirical results are useful for statistical inference.

Table 5.6: Determinants of Cash Holdings (Static Panel Regression)

	FULL SAMPLE			HOSPITALITY FIRMS			NON-HOSPITALITY FIRMS		
VARIABLES	Pooled OLS	FE with Hetero & Serial Correlation	Fama-Macbeth	Pooled OLS	RE with Hetero & Serial Correlation	Fama-Macbeth	Pooled OLS	FE with Hetero & Serial Correlation	Fama-Macbeth
lncash									
HOSP	-0.215***		-0.174**						
	(-2.889)		(0.0677)						
gro	0.106**	0.106	0.168**	0.434***	0.506**	0.717**	0.0721*	0.0617	0.206**
	(2.467)	(1.533)	(0.0718)	(2.869)	(2.383)	(0.279)	(1.698)	(0.961)	(0.0831)
Size	-0.0588***	-0.133	-0.0697***	-0.251***	0.342***	-0.206***	-0.00874	-0.103	-0.0195
	(2.938)	(1.566)	(0.0191)	(5.244)	(3.536)	(0.0475)	(0.412)	(1.174)	(0.0204)
CF	3.016***	2.397***	2.734***	-1.329	-0.750	-3.688	3.316***	2.903***	3.097***
	(7.070)	(3.723)	(0.367)	(-1.216)	(-0.646)	(2.724)	(7.455)	(4.934)	(0.493)
var	0.0280	0.0318***	1.805	2.528	0.586	6.516	0.0261	0.0311***	2.278
	(1.253)	(3.596)	(1.284)	(1.462)	(0.355)	(4.951)	(1.227)	(3.411)	(1.486)
lev	-0.422***	-1.423***	-0.453**	-0.421	-0.910	0.932*	-0.720***	-1.675***	-0.643***
	(-2.606)	(-2.991)	(0.147)	(1.109)	(-1.368)	(0.477)	(-4.221)	(-3.055)	(0.159)
LIQ	-0.0209	-0.745	0.141	-2.781***	1.473*	2.139***	-0.499***	-1.135**	-0.357**
	(-0.123)	(-1.605)	(0.101)	(5.071)	(1.765)	(0.591)	(-2.870)	(-2.341)	(0.117)
CAPEX	0.544	-0.472	1.255***	-1.351	-0.783	-3.945	0.794*	-0.450	1.080**
	(1.275)	(-1.354)	(0.326)	(-1.270)	(-1.313)	(2.302)	(1.789)	(-1.030)	(0.359)
Div	-0.0391	-0.0391	0.0474	0.409**	0.0580	0.705***	-0.144*	-0.0640	-0.0772
	(-0.505)	(-0.416)	(0.0981)	(2.465)	(0.355)	(0.151)	(-1.710)	(-0.622)	(0.103)
Constant	-2.931***	-2.862***	-3.231***	-5.129***	4.902***	5.497***	-2.392***	-2.448***	2.756***

	FULL SAMPLE			HOSPITALITY FIRMS			NON-HOSPITALITY FIRMS		
VARIABLES	Pooled OLS	FE with Hetero & Serial Correlation	Fama-Macbeth	Pooled OLS	RE with Hetero & Serial Correlation	Fama-Macbeth	Pooled OLS	FE with Hetero & Serial Correlation	Fama-Macbeth
	(-21.13)	(-4.824)	(0.117)	(-15.84)	(-6.302)	(0.304)	(-16.03)	(-3.937)	(0.167)
Breusch-Pagan LM Test	1220.71***			182.68***			848.09***		
	(0.000)			(0.000)			(0.000)		
Hausman Test		20.8***						19.96***	
		(0.0077)						(0.0105)	
Multicollinearity (VIF)	1.25			1.27			1.27		
Wald test		32039.54***						9175,70***	
		(0.000)						(0.000)	
Wooldridge test (F-Stat)		54.622***						52.637***	
		(0.000)						(0.000)	
Observations	1,031	1,031	1,031	213	213	213	818	818	818
R-squared	0.128	0.133	0.207	0.326		0.550	0.146	0.168	0.240
Number of groups			12			12			12
Number of code		98			19			79	

Statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

The coefficient on the hospitality firm indicator variable (HOSP) is -0.46 for the full sample (column 1). This result indicates that hospitality firms hold approximately 37% ($e^{-0.46}-1$) less cash than non-hospitality firms. Based on our model, trade-off theory supports most of the observed relationship. Firm size is found to have negative relationship with cash holdings. Firms hold significantly higher amounts of cash as the variability of cash flows increase. These results are consistent with the one documented Opler et al. (1999).

As highlighted by Gao et al. (2013), corporate cash policy should balance the precautionary demand (Keynes, 1936; Baumol, 1952; Miller and Orr, 1966) against agency problems (Jensen, 1986; Stulz, 1990). Given higher costs of accessing external capital; exposure to high seasonality and uncertainties, the precautionary motive should be stronger for hospitality firms. Nevertheless, based on the findings by Harford et al. (2008), the worse-governed firms in a sample of public listed U.S. firms hold less cash because they spend rather than maintain cash reserves. Therefore, it could be due to financing frictions if we find that non-hospitality firms hold lower cash reserves than hospitality firms. Similar to Harford et al. (2008), the agency explanation of cash is only supported if the finding that non-hospitality firms hold higher cash reserves.

The significance of observed coefficients of two cash-substitute variables supports the hypothesis. Results show that firms having more liquid asset substitute and net working capital hold lesser in cash which is consistent with the findings by Ozkan and Ozkan (2004) and Ferreira and Vilela (2004). We also include year dummies to explore the possibility that some external shocks such as crisis may influence companies' cash balances. When year dummies are included in the regression model, some of the years are significant, while some variables have otherwise. These findings show that the impact of such variables on cash holdings could also affect by external events such as crisis.

We find a significant and negative impact of liquid asset substitutes (LIQ) on cash holding at the 1% level in the system GMM model for non-hospitality firms. This is attributed to the fact that cash substitutes play an essential role in reducing the number of cash holdings. The result is congruous with past findings as discussed in section 5.4. However, contrary to the expectations, we found no significant association between the firm size (SIZE) in hospitality firm. This is in line with some previous studies (Ozkan and Ozkan, 2004; Guney et al., 2007; García-Teruel and Martínez-Solano, 2008). Thus, size might not be a determinant of cash holding for hospitality firms.

The discussion of the relationships also focuses on the results presented in Row 1 in Table 5.7. The results demonstrate a highly significant lagged-dependent variable coefficient which indicates that the firms have a target amount of cash which they pursue, balancing the costs and benefits of holding cash. The speed of adjustment coefficient is about 0.4 which means that it takes a firm approximately three years to adjust to its target cash level. This speed of adjustment is relatively slow compared to what was found by Ozkan and Ozkan (2004) for firms in UK (0.605), Guney et al.(2003) for French (0.558), German (0.556), UK (0.602) and Japanese (0.561) firms. This slow adjustment speed could be attributed to the market frictions faced by developing countries which results in many financial constraints causing firms to hold on to higher levels of cash (Al-Najjar, 2013).

Table 5.7: Determinants of Cash Holdings (Two-step System GMM)

VARIABLES	Full Sample	Hospitality Firms	Non-Hospitality Firms
lncash			
lncash = L,	0.389***	0.399***	0.438***
	(22.60)	(2.631)	(34.81)
HOSP	-0.460***		
	(-2.723)		
gro	0.126***	0.403	0.113***
	(8.663)	(1.387)	(14.92)
Size	-0.179***	-0.0464	-0.123***
	(7.099)	(0.146)	(8.523)
CF	1.460***	1.623	1.807***
	(11.98)	(0.475)	(19.15)
var	0.0580***	2.822	0.0670***
	(16.43)	(0.743)	(33.10)
lev	-1.037***	-1.076	-0.665***
	(-7.677)	(-0.883)	(-5.842)
LIQ	-0.172	4.326***	-0.563***
	(-1.011)	(2.617)	(-5.283)
CAPEX	-1.187***	-2.303	-1.455***
	(-6.321)	(-0.488)	(-9.440)
Div	-0.101***	-0.141	-0.0762***
	(-2.917)	(-1.138)	(-4.464)
Constant	-2.047***	-1.579	-1.822***
	(-11.35)	(-0.733)	(-15.87)
Sargan Test	69.60233	9.335003	69.64283
	(0.2651)	(1.000)	(0.2934)
Instruments valid?	Yes	Yes	Yes
AR(1)	-5.3743***	-2.175**	-4.992***
	(0.000)	(0.0296)	(0.000)
AR(2)	-0.19009	-0.71757	-0.08261
	(0.8492)	(0.4730)	(0.9342)
Observations	964	197	767
R-squared			
Number of groups			
Number of code	98	19	79

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.6.4 Direct Effect of Tourism Crisis on Corporate Cash Holdings

Table 5.8 shows the findings of the direct impact of the crisis on corporate liquidity. The coefficients signs of the benchmark cash determinants are consistent with those in previous studies. GRO has a positive effect for non-hospitality firms indicating that firms held more cash to take advantage of upcoming growth opportunities. Second-order serial correlation is not present in all the three models thus confirming consistent estimations. The lagged dependent variable is statistically significant therefore it signifies that the dynamic GMM is a suitable estimator. The empirical results hence can be relied upon for statistical inference. In the first model, trade-off theory supports most of the observed relationship. Firm size is found to have a negative relationship with cash holdings. While the variability of cash flow holds significantly higher amounts of cash as the risk increase. These results are consistent with the one documented Opler et al. (1999). However, there is no significant relationship between growth opportunities and level of cash. This could be due to a high positive relationship with the variable of financing deficit.

Our results on hospitality firms strongly supported by the pecking order theory. Firms with higher financing deficits tend to hold lower cash level. Contrary to the findings by Harford et al., (2008) in the US., hospitality firms that pay dividends hold more cash. The dividend dummy confirms the expectation. Such deviations could be due to institutional differences. LEV has a negative coefficient for across industries considered. Similar to the result of Acharya et al. (2007), it indicates that that cash and debt are substitutes regarding financing, In addition, hospitality firms do not suffer from agency costs of free cash flows that characterize public companies in the US. US-listed firms pay more regularly while Malaysia hospitality (and non-hospitality) firms pay once a year. It follows that firms that regularly distribute regular dividends are more likely to have more cash to meet the dividend payment by the end of the fiscal year. The coefficient for CF is

positive across industries indicating that firms retain cash from operating income for precautionary purpose.

The significance of observed coefficients of two cash-substitute variables supports the hypothesis. Results show that firms having more liquid asset substitute and net working capital hold lesser in cash which is consistent with the findings by Ozkan & Ozkan (2004) and Ferreira and Vilela (2004). Model 3 include year dummies to study the possibility that corporate cash holdings can be affected by external shocks. When year dummies are included in the regression model, some of the years are significant, while some variables have otherwise. These findings show that the impact of such variables on cash holdings could also affect by external events such as crisis. The coefficients of the dummy variables of Cobra and Python provide insights on the direct effect of the crisis on corporate liquidity. The coefficient on Cobra measures the effect of the sudden threat, whereas the coefficients on Python measure the effect of gradual threat events. Focusing on all firms in Column 1, the coefficients on Python-type of crisis are insignificant, indicating no significant increase in corporate cash holdings as a result of the gradual crisis. Overall, our findings present that tourism crises are associated with the observed decline in corporate liquidity. We find that the Cobra-type of crises is negative and significant, implying that adjustment costs are more substantial during negative sudden threats events. This is consistent with our hypothesis that adjustment costs are exacerbated by sudden threats when the business operations are drastically disrupted, and financial system faces severe constraints. However, the coefficient is not significant in all columns in the event of Python-type of crisis.

Table 5.8: Effect of Crisis on Cash Holdings (by type of crisis)

VARIABLES	Full Sample	Hospitality	Non-hospitality
lncash			
lncash = L,	0.390***	0.384***	0.430***
	(23.77)	(2.716)	(37.52)
HOSP	-0.459***		
	(-2.736)		
gro	0.128***	0.544	0.113***
	(8.435)	(1.244)	(13.59)
Size	0.165***	-0.0855	0.109***
	(7.504)	(-0.261)	(9.041)
CF	1.408***	5.871	1.770***
	(11.25)	(1.112)	(20.90)
var	0.0630***	0.670	0.0692***
	(17.24)	(0.140)	(38.67)
lev	-1.100***	-0.742*	-0.676***
	(-8.922)	(-0.631)	(-4.566)
LIQ	-0.214	4.463**	-0.526***
	(-1.288)	(2.433)	(-5.402)
CAPEX	-1.206***	-10.65	-1.595***
	(-5.799)	(-1.278)	(-9.573)
Div	-0.107***	-0.0836	-0.0850***
	(-3.165)	(-0.411)	(-4.664)
Cobra	-0.0953***	-0.0631*	-0.0865***
	(-3.661)	(-0.390)	(-3.470)
Python	0.0378	0.0675	0.0200
	(2.170)	(0.364)	(1.517)
Constant	-1.926***	-0.757	-1.753***
	(-12.60)	(-0.349)	(-20.61)
Sargan Test	68.1366	7.116859	69.49701
	(0.3069)	(1.0000)	(0.2976)
AR(1)	-5.401	-2.7335***	-4.9546***
	(0.0000)	(0.0063)	(0.0000)
AR(2)	-0.11216	-0.99193	-0.02095
	(0.9107)	(0.3212)	(0.9833)
Observations	964	197	767
Number of code	98	19	79

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.6.5 Indirect Effect of Tourism Crisis on Corporate Cash Holdings

Table 5.9 shows the results on how the impact of the crisis on the sensitivity of cash to GRO, CAPEX, and CF. The current paper also tested the indirect impact of the crisis typologies on corporate liquidity. Following Chen and Chang (2013), The impacts were examined through three channels. They are growth opportunities, investment demand, profitability. We want to test how the sensitive corporate liquidity is to the variation of these variables based on crisis typologies. Based on past literature, the precautionary and transaction cost motives to hold cash should more prevalent as a result of the crisis. There are higher information asymmetry and transaction cost under such threats. Furthermore, access to the external market and investment options are restricted. GRO, CAPEX, and CF were used to measure growth opportunities, investment demand, and profitability, respectively. To test hypothesis 2, the interaction variables were created by multiplying GRO, CAPEX, and CF by crisis typologies (either COBRA or PYTHON). GMM model with these interaction variables is used. We then test the estimated coefficients for statistical significance. If transaction cost or precautionary motives for holding cash is intensified post-crisis, we expect that these interaction variables will be significantly positive. To mitigate the multicollinearity problem, we examine the indirect impact of the crisis on corporate liquidity on these three variables one at a time. This step not only prevents an excessive number of interaction variables in the model estimation but also provide better insights on the sensitivity of the cash.

Table 5.9: Indirect Impact of Crisis on Growth Opportunities, Profitability and Investment Demand (Two-step System GMM)

VARIABLES	Cash sensitivity to Growth	Cash sensitivity to profitability	Cash sensitivity to investment demand
DV= lncash			
lncash = L,	0.387***	0.389***	0.391***
	(23.89)	(24.28)	(23.89)
HOSP	-0.441***	-0.511***	-0.507***
	(-2.613)	(-3.036)	(-3.085)
gro	0.133***	0.137***	0.136***
	(8.744)	(8.638)	(9.395)
Size	0.169***	0.170***	0.164***
	(7.524)	(8.050)	(7.164)
CF	1.399***	1.408***	1.172***
	(11.18)	(11.24)	(8.370)
var	0.0629***	0.0645***	0.0649***
	(17.96)	(18.72)	(15.65)
lev	-1.111***	-1.066***	-1.174***
	(-9.090)	(-8.754)	(-8.677)
LIQ	-0.201	-0.214	-0.235
	(-1.179)	(-1.333)	(-1.475)
CAPEX	-1.183***	-1.614***	-1.173***
	(-5.696)	(-9.160)	(-5.636)
Div	-0.111***	-0.110***	-0.110***
	(-3.234)	(-3.274)	(-3.382)
cobra	-0.0687	-0.150***	-0.0906***
	(-1.331)	(-4.835)	(-2.838)
python	0.0444*	-0.00503	0.0120
	(1.693)	(-0.211)	(0.615)
cobraxgro	-0.0458		
	(-0.924)		
pythonxgro	-0.00858		
	(-0.326)		
cobraxcapex		1.191***	
		(3.243)	
pytonxcapex		0.825*	
		(1.702)	
cobraxcf			-0.149
			(-0.512)
pythonxcf			0.605***
			(2.853)
Constant	-1.959***	-1.940***	-1.867***
	(-12.56)	(-13.92)	(-12.14)
Observations	964	964	964
R-squared			
Number of groups			
Number of code	98	98	98

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.6.6 Further Robustness Checks

If the residuals in the panel data sets are correlated across firms or across time, then the standard errors estimated can be biased. As such, Petersen (2009) suggests that panel data analysis should adjust to the standard errors for possible dependence in the residuals. In the effort to provide support to the robustness of results for this study, different adjusted standard errors are compared to consider the possibility of the existence of time and the firm effects. As shown in Table 5.10, the different adjusted standard errors are not widely deviated among each other. This is one of the criteria indicating a large robustness of results. White corrected standard errors and panel corrected standard errors are included for comparison purposes. The findings are similar to the results presented in earlier sections.

Table 5.10: Results of Robustness Checks Using Various Standard Errors

VARIABLES	White	GLS	GLS-cluster firm	FGLS
gro	0.0342	0.0370	0.0370	0.0658
	(0.0667)	(0.0419)	(0.0576)	(0.0421)
Size	-0.120	-0.0405	-0.0405	-0.00889
	(0.140)	(0.0384)	(0.0558)	(0.0212)
CF	2.665***	2.808***	2.808***	3.117***
	(0.591)	(0.388)	(0.560)	(0.439)
var	0.0293***	0.0311*	0.0311***	0.0327
	(0.00763)	(0.0167)	(0.00777)	(0.0211)
lev	-1.524**	-1.367***	-1.367***	-0.684***
	(0.627)	(0.206)	(0.519)	(0.168)
LIQ	-0.957*	-0.903***	-0.903**	-0.500***
	(0.538)	(0.197)	(0.429)	(0.173)
CAPEX	-0.487	-0.291	-0.291	0.835*
	(0.446)	(0.389)	(0.449)	(0.443)
Div	-0.126	-0.147*	-0.147	-0.180**
	(0.0993)	(0.0775)	(0.0949)	(0.0833)
Constant	-1.441**	-1.895***	-1.895***	-2.429***
	(0.691)	(0.231)	(0.376)	(0.179)
Observations	818	818	818	818
R-squared	0.199			
Number of code	79	79	79	79

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.6.7 Summary of Findings

	Hypothesis	Supported?
1.1	There is a positive relationship between growth opportunities and corporate cash-holding.	Yes
1.2	There is a negative relationship between firm size and corporate cash-holding.	Yes
1.3	There is a positive/negative relationship between cash flow and corporate cash-holding.	Yes
1.4	There is a positive relationship between cash flow variability and corporate cash holding.	Yes
1.5	There is a negative relationship between liquid assets substitute and corporate cash holding.	No (NHosp) Yes (Hosp)
1.6	There is a negative relationship between leverage and cash holding.	Yes
1.7	There is a negative relationship between capital expenditure and corporate cash holding.	Yes
1.8	There is a positive relationship between dividend and corporate cash-holding.	Yes
1.9	There is a positive relationship between a firm's tourism crisis and firm's cash-holding.	Yes (Cobra)

5.7 Conclusion

There is only a handful of cash holdings research done in the context of Malaysia. Existing empirical literature on cash holdings predominantly focuses on public listed firms in the U.S. Some recent evidence also focuses either on large European listed firms. Although informative, generalisation across the entire industry and different contexts may be limited especially to the emerging markets. Among the few existing studies which focus on emerging market is Wasiuzzaman (2014). The results show that firms in Malaysia do adjust to targeted cash level. However, the speed of adjustment is determined slower compared to that those in other countries. Financing constraints and market imperfections are essential determinants of cash holdings among public listed firms in Malaysia. Malaysia is an ideal paradigm to study cash holdings decision among hospitality firms. Hospitality firms hold an average of cash ratio which is less than 10% in Malaysia. Firm size is negatively related to the level of cash. Such firms are considered to be riskier and financially constrained. Therefore, there is a need to hold more cash compared to larger firms. These findings are aligned with the argument by the Trade-off Theory on the determinants of cash holdings. In addition, dividend payments are found to impact cash holdings as well. The cash level of firms which pay out dividends are prone to a higher level of cash. This could be due to lower agency costs of free cash flows. The paper aims to shed light on how firm characteristics affects corporate cash holdings in the context of hospitality firms in emerging market. There is a need for relevant authorities and policymakers to study the issue of sustainability of hospitality industry. Furthermore, reinforcing internal strength such as corporate liquidity by hospitality firm is vital for survival in a highly competitive environment in the long run.

Liquidity is imperative to the hospitality industry, especially during crises. However, minimal research was conducted to address this issue. We use a panel dataset of public listed hospitality firms in Malaysia to study the determinants of cash holdings and how

tourism crises may also impact corporate cash holding decisions. We are mainly motivated by the crisis typologies and the lack of evidence for emerging market such as Malaysia. The finding is useful and relevant especially for emerging markets. Although studies on cash holdings are not new, however, previous studies rarely look at the impact of cash during a crisis, especially in hospitality management literature. Crisis management and hospitality are gaining growing interest from practitioners and academicians. Malaysia has been affected by some severe crises in recent years. However, response strategies can be deficient, and firms are unprepared. Such tourism crises trigger a response in which various strategies are employed.

This paper contributes by examining corporate liquidity in hospitality firms from an emerging market perspective. We focus on whether the crisis impacted corporate cash holdings. The findings show that there is a decrease in corporate cash holdings based on the crisis type. Consistent with precautionary motive, this negative shock also changed the sensitivities of corporate liquidity to growth opportunities, investment demand profitability. This paper also fills in the gap for cash holdings and precautionary savings motive literature (e.g., Almeida et al., 2004; Bates et al.,2009; Opler et al., 1999, etc.). These past findings show that the precautionary motive for holding cash is more pronounced in the presence of asymmetric information or agency costs which raising external funds are challenging.

This study also shed light on the potential use of cash as a buffer against uncertainty during the crisis. Thus, internal financing became a critical financing source, such that precautionary and transaction cost motives for holding cash strengthened after the crisis. Our primary results complement and extend those of previous studies on corporate cash holdings. The findings show that there is a negative relationship between leverage, firm size, and other liquid assets substitute with cash holdings. In addition, higher liquidity is

partially motivated by precautionary motives. The results show to find that there is a positive relationship between industry volatility and cash holdings. Our study uncovers essential new aspects of the role of crisis typologies on corporate liquidity. Overall, tourism crisis particularly Cobra type has a positive and economically significant effect on firms' cash holdings. We also present evidence that less financially flexible firms are more vulnerable to sudden drops in their cash flows. These results have significant policy implications to liquidity problems in developing countries, especially during turbulent times. In the case of Malaysia, our findings show that there is a need to construct policies dedicated to alleviating liquidity issues for hospitality firms. The paper also provides suggestions to policy-makers for improving corporate liquidity management, which in turn has the potential to enhance the crisis management and business resilience of hospitality firms. Related to this finding, the fact hospitality maintains low cash research, and its implication to crisis management are relevant issues for future research.

CHAPTER 6: CORPORATE GOVERNANCE AND CASH HOLDINGS IN HOSPITALITY FIRMS: DO BOARD CHARACTERISTICS MATTER?

6.1 Introduction

Efficient allocation of firms' resources is crucial for corporate sustainability. Corporate cash holdings thus emerged as an important issue in recent years. Pioneers studies focus primarily on the determinants of corporate cash holdings and the optimal cash holdings level, especially in the U.S. context. Firms prone to maintain larger cash reserves for transactional and precautionary reasons (Kim, Mauer, & Sherman, 1998; Opler, Pinkowitz, Stulz, & Williamson, 1999; Ozkan & Ozkan, 2004). Cash management is also paramount to the operational success of businesses in the hospitality industry (Caraux & Geller, 1977; Jang, Park, & Lee, 2011). Chathoth & Olsen (2007) and Lakonishok, Shleifer, Vishny, Hart, & Perry (1992) support the viewpoint of Myers (1977) that firms like hospitality firms should maintain more liquid assets to deal with the potentially adverse impact. Myers (1977) posits that maintaining high liquidity may alleviate the burden resulted from financial shocks. Such situation is especially relevant to firms which possess a significant proportion of intangible assets. Firms as such experience higher financial distress costs thus there is a need to invest sufficient liquidity minimises this potential distress.

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 et al., 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, & 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, & Mat 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 variability 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 (Kosova and Enz, 2012; Kuo et al., 2008; Song et al., 2011; Wang, 2009). Different from the other industries, hospitality firms are required to continually strategize to accommodate the environments that change rapidly (Pizam and Shani, 2009; Singal, 2015). In this case, board characteristics are essential to examine the changing landscape of the hospitality industry and the behaviour of hospitality firms. The competency of the board of directors is especially vital to capture the competitive advantages via better supervision and strategic planning.

In addition, past studies show that hospitality firms differ with other firms regarding investment and financing policies (Oak and Iyengar, 2009). Hospitality firms such as restaurants had been characterized as a business that experiences cyclical patterns and strong seasonality (Choi et al., 2007; Upneja and Dalbor, 1986). They operate in a highly competitive and saturated market in which financial and operational risks are high (Kim et al., 2011). Hospitality firms tend to invest significantly in real estate and fixed assets which are highly illiquid as compared to firms in other industries (Bharwani and Mathews, 2012).

Moreover, hospitality firms are also subject to interest rate risk as companies have high debts (Jang, Tang, & Chen, 2008). Since debt financing in the hospitality industry is higher than in other sectors (Dalbor, 2002), lenders may feel obliged to engage in more monitoring. According to Agrawal & Chadha (2005), it is thus possible that the hospitality industry has better control mechanisms for agency problems than other industries. However, Oak & Iyengar (2009) conclude otherwise. Based on their results on the differences between corporate governance mechanisms among hospitality firms and non-hospitality firms, their findings show that hospitality firms are prone to agency problems. Hospitality firms have poor governance mechanisms in place. However, compared to their counterpart, hospitality firms achieve better financial performance than non-hospitality firms. Furthermore, the deviation remains a puzzle to date. 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.

While there have been a few empirical studies emphasizing the importance of governance in hotel companies (Dahlstrom et al., 2009; Oak and Iyengar, 2009; Ozdemir and Upneja, 2012; Tang, 2006), only a handful of research has looked at the hospitality industry. Research on the link between board governance and financial performance or corporate decisions, especially cash holdings are lacking. In contrast, research in non-hospitality firms has increasingly emphasized the importance of board independence, CEO duality and managerial ownership to firm performance (De Andres et al., 2005; Donnelly and Mulcahy, 2008; Kaymak and Bektas, 2008; Kiel and Nicholson, 2003). Therefore, there is a need to bridge this gap by studying the effect of board governance on cash holdings in hospitality firms, especially in the Southeast Asia region.

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, Mahrt-Smith, & Servaes (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.

The remainder of this paper is organized as follows. A brief literature review and formulation of research hypotheses are presented in Section 6.2. The section is followed by Section 6.3 where the detailed methodology adopted in this study is presented. Empirical results and discussion are discussed in Section 6.4 followed by a summary in 6.5. Finally, Section 6.6 concludes the study and indicates its theoretical and practical implications.

6.2 Literature Review and Hypothesis Development

6.2.1 Board as Internal Governance Mechanism

A major component of corporate governance mechanism is the board of directors. Zahra & 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 et al., 2003; Garner et al., 2017; Rediker and 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 and 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 et al., 2015; Jarboui et al., 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 et al., 2009; Rediker and Seth, 1995).

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 et al., 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 and Mahrt-Smith, 2007).

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 & Salancik (2003) (as cited in Hillman, Withers, & Collins, 2009, p. 1404), several studies such as Brown (2005) and Miller-Millesen (2003) identified the board as a key resource for the firm.

6.2.2 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 and 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 et al., 1999; John and Senbet, 1998). Therefore, with enhanced governance through independent board, the less cash is expected. The hypothesis is formulated as follows.

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

6.2.3 Board Duality

An independent board and a CEO non-duality structure are favoured by agency theory to monitor management effectively (Fama and 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 and Smith, 2001; Fama and 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 cash holdings negatively. With board duality, governance is enhanced and therefore lower cash holdings are expected. 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. The hypothesis is formulated as follow:

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

6.2.4 Board Size

Board size (BSIZE) is computed by the number of directors sitting on the board. According to Boubaker, Derouiche, & Nguyen (2013), board size is a proxy for board monitoring quality. An optimal number of board members will enable better monitoring of managerial activities and behaviour. 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, & 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 and Kusnadi, 2005). However, resource dependence theorists suggest that larger board size is positively related to performance (Al-Najjar and 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.

6.2.5 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 has slowly gained interest by some recent studies (Julizaerma and Sori, 2012; Low et al., 2015; Nguyen et al., 2015b). The board gender is documented that it impacts the corporate decisions in recent literature. The differences are mainly arising from risk preferences. Past research 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). Bøhren & Staubo (2015) 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. In addition, according to Barber and Odean (2001), women are more risk-averse than their male counterpart, therefore higher cash holdings are expected. 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.

6.2.6 Board Busyness

Board busyness had been highlighted in recent literature (Boubaker et al., 2013). 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 et al., 2014; Ferris et al., 2003; Jiraporn et al., 2009; Rouyer, 2016). According to Falato, Kadyrzhanova, & Lel (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. In addition, directors who are involved in multiple positions may not be able to commit and perform the duty and responsibilities up to the par. In such cases, the busy board will have to depend on information obtained from insiders. In the long run, it will affect the quality of their judgment of managerial actions and may overestimate the cash needs and more risk averse. Therefore, the following hypothesis is formulated.

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

6.2.7 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 et al., 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 & Zain (2010) and (Hsu, Huang, & 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 negative relationship between board diligence and the level of cash holdings.

6.2.8 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 behaviour and to reduce agency conflicts as well as opportunistic behaviour 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, therefore lower agency problem and lower cash hoarding. 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 negative relationship between managerial ownership and the level of cash holdings.

6.3 Methodology

6.3.1 Sample Overview

Our sample consists of public listed hospitality firms in Malaysian and Singapore. Several reasons justify this focus. Firstly, Malaysia and Singapore were the pioneers in the region to establish the Code of Corporate Governance post-Asian financial crisis in the year 2000 and 2001 respectively. Therefore, it allows longer time frame to study. Both Singapore and Malaysia adopt OECD Principles of Corporate Governance. The outputs of the Asian Roundtable are used as a guideline in development of listing rules, regulations and corporate governance codes (OECD, 2014). In addition, both countries are top-ranked based on Corporate Governance (CG) Index (Cochran et al., 2016). Thus, they provide a natural laboratory for a comparative analysis to examine the impact of corporate governance mechanism on cash holdings. Secondly, both countries shared similar attributes. It is prevalent that family-based firms dominate in Malaysia and Singapore. Previous studies documented that companies in both countries tend to have a high concentration of family ownership. Cross-ownership, extensive and diversified business structures, and risky financial strategies are common (Claessens, Djankov, & Xu, 2000; Stijn Claessens, Simeon, Fan, & Lang, 2002).

Thirdly, relative to other countries in the Southeast Asia region, Singapore and Malaysia have more established accounting and regulatory institutions that lend themselves to examination. Malaysia and Singapore have accounting standards that are

viewed as high-quality (Ball et al., 2003). These countries thus provide a useful setting for testing the importance corporate governance. Moreover, the corporate structure of firms in Singapore and Malaysia implement a unitary board system, and the functions of boards are similar to the U.K. Thus, the findings from past studies may be used in formulating hypotheses relating to board attributes. Lastly, similar to Kusnadi (2011) and Mak & Kusnadi (2005), we face obstacles in conducting a comprehensive study for the entire region due to the availability of the data, therefore, precluded the addition of distant countries to this study. Besides, the language barrier is one of the major constraints in data collection as most governance data such as board characteristics need to be manually extracted from the company's annual reports. Therefore, following the previous authors, we limit our choice to only two countries, Singapore and Malaysia which have a complete set of data for the study period and written in English for analysis purposes.

6.3.2 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.

6.3.3 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 6.2. 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, modelling 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 & Kuzey (2014), we adopt the generalized method of moment (GMM) estimation to control the endogenous problem.

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

The dependent variable in the model is cash holdings (CASH). Similar to the previous studies such as Ozkan & Ozkan (2004), Bigelli & Sánchez-Vidal (2012), and Al-Najjar & 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), leverage (lev), liquid asset substitutes (liq), capital expenditure (CAPEX), and the dividend dummy (Div). Details of the variables measurement are listed in Table 6.1.

We then examine the collective impact of governance mechanism and excess on the firm performance using model 2. We use ROA as a proxy for a firm's performance (Campbell & Minguez-Vera, 2008; Palia & Lichtenberg, 1999). ROA in the equation was calculated by dividing net income by total assets.

$$ROA_{it} = \beta_0 + \beta_1 EXCASH_{it-1} + \beta_2 BIND_{it-1} + \beta_3 ACIND_{it-1} + \beta_3 BNED_{it-1} + \beta_4 DUAL_{it-1} + \beta_5 BSIZE_{it-1} + \beta_6 GENDER_{it-1} + \beta_7 BDBUSY_{it-1} + \beta_8 BDMEET_{it-1} + \beta_8 ACMEET_{it-1} + \beta_{10} LARGE_{it-1} + \beta_{11} INSIDER_{it-1} + \beta_{12} BIND_{it-1} * CASH_{it-1} + \beta_3 ACIND_{it-1} * CASH_{it-1} + \beta_3 BNED_{it-1} * CASH_{it-1} + \beta_4 DUAL_{it-1} * CASH_{it-1} + \beta_5 BSIZE_{it-1} * CASH_{it-1} + \beta_6 GENDER_{it-1} * CASH_{it-1} + \beta_7 BDBUSY_{it-1} * CASH_{it-1} + \beta_8 BDMEET_{it-1} * CASH_{it-1} + \beta_8 ACMEET_{it-1} * CASH_{it-1} + \beta_{10} LARGE_{it-1} * CASH_{it-1} + \beta_{11} INSIDER_{it-1} * CASH_{it-1} + \beta_{12} SIZE_{it-1} + \beta_{13} CF_{it-1} + \beta_{14} LEV_{it-1} + \beta_{15} CAPEX_{it-1} + \alpha_t + Countrydummy + YEAR\ dummies + u_{it}$$

(Eq. 2)

Table 6.1: Summary variables description

Variable	Variable name	Description
Dependent Variable		
Cash ratio	CASH	Logarithm of (Cash & Cash equivalent)/ Total Assets
Independent Variables		
Board Independence		
Independent directors	BIND	Percentage of independent directors on the board
Audit Committee	ACIND	Percentage of independent directors on the audit committee
Non-exec directors	BNED	Percentage of non-executive directors on the board
Board Leadership		
CEO Duality	DUAL	A dummy variable that equals one if the CEO is also the chairman; it equals zero otherwise.
Gender Diversity		
Board gender	GENDER	Percentage of female members on the board.
Board Size		

Variable	Variable name	Description
Board Size	BSIZE	Number of board members
Board busyness		
Busyness	BDBUSY	Number of directors holding more than two directorships outside the firm divide by total no. of directors on board
Board Diligence		
Board meeting frequency	BDMEET	Number of board meetings during the year
Audit committee meeting frequency	ACMEET	Number of audit committee meetings during the year
Ownership Structure		
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.
Managerial Ownership	INSIDER	% of total shares owned by a firm's managerial personnel.
Control Variables		
Firm size	SIZE	Natural logarithm of total assets
Cash flow	CF	(Earnings before tax + depreciation & amortization) / Total assets
Growth opportunities	GRO	Market to book ratio
Leverage	LEV	Total liabilities/ Total assets
Dividend	DIV	Dummy variable: 1- if dividend is paid; 0= if dividend is not paid
Capital expenditures	CAPEX	Total capital expenditures
Liquidity asset substitutes	LIQ	(Current assets- current liabilities- cash & equivalents)/ Total assets.

6.4 Empirical Results and Discussion

6.4.1 Descriptive Statistics

Table 6.2 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, Kim, & Woods (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 6.2: Descriptive Statistics (by Country)

	MALAYSIA					SINGAPORE				
variable	**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 6.3 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 range 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 6.4 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.

6.4.2 Panel Regression Analysis

Table 6.5 shows the results of the fixed-effect static-panel estimations. Although static-panel estimations may overcome the issues of heterogeneity, however, the contemporaneous endogenous problem remains.

Table 6.3: Descriptive Statistics Summary for Total Sample

Variable	Mean	Std.Dev.	Min	Max	p25	Median	p75
IND	0.458	0.133	0	0.833	0.375	0.429	0.556
ACIND	0.432	0.15	0	1	0.333	0.429	0.5
BNED	0.616	0.15	0.2	1	0.5	0.6	0.714
DUAL	0.37	0.483	0	1	0	0	1
BSIZE	7.348	2.379	3	17	6	7	8
GENDER	0.114	0.166	0	1	0	0.0714	0.167
BDBUSY	0.361	0.251	0	1	0.167	0.333	0.5
BDMEET	4.885	2.595	0	25	4	4	5
ACMEET	4.278	1.602	0	9	4	4	5
LARGE	0.509	0.23	0	0.901	0.382	0.547	0.7
INSIDER	0.136	0.205	0	0.796	0.0007	0.0102	0.239
cash	0.166	0.166	0.00356	0.735	0.0452	0.103	0.239
gro	0.785	0.786	0	5.94	0.37	0.6	0.97
size	5.753	1.935	-0.428	9.989	4.307	6.029	7.071
cf	-0.0412	1.239	-25.9	1.5	-0.0251	0.0166	0.0572
var	0.181	1.241	0.000385	15.14	0.0141	0.0319	0.0714
lev	0.455	0.201	0.0502	1.138	0.296	0.451	0.582
liq	-0.0498	0.178	-0.814	0.578	-0.119	-0.0281	0.0482
capex	0.0477	0.0694	0	0.617	0.00768	0.0212	0.0577
div	0.77	0.421	0	1	1	1	1

Table 6.4: Pearson correlation matrix and variance inflation factors

	lncash	gro	size	cf	var	lev	liq	capex	div	VIF
MALAYSIA										
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
SINGAPORE										
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

Table 6.5: The Effect of Corporate Governance on Cash Holdings (Static Panel)

	(1)	(2)	(3)	(4)
VARIABLES	Pooled OLS	OLS with Hetero & Serial Correlation	FE with Hetero & Serial Correlation	Fama-Macbeth
IND	-0.205	-0.205	0.147	-0.342
	(-0.378)	(-0.378)	(0.308)	(0.658)
ACIND	2.407***	2.407***	-0.289	1.704
	(4.579)	(4.579)	(-0.585)	(1.068)
BNED	0.607*	0.607*	0.933**	0.673*
	(1.729)	(1.729)	(2.560)	(0.343)
DUAL	0.589***	0.589***	0.142	0.726**
	-4.998	(4.998)	(1.054)	(0.237)
BSIZE	0.129***	0.129***	0.0276	0.0832
	(3.903)	(3.903)	(0.641)	(0.0451)
GENDER	0.600**	0.600**	0.538*	0.412*
	(1.997)	(1.997)	(1.839)	(0.216)
BDBUSY	0.234	0.234	0.211	0.558***
	(1.076)	(1.076)	(0.625)	(0.122)
BDMEET	-0.0369*	-0.0369*	0.0250	-0.000360
	(-1.784)	(-1.784)	(1.442)	(0.0297)
ACMEET	0.0690*	0.0690*	-0.0371	-0.00192
	(1.826)	(1.826)	(-1.148)	(0.0408)
LARGE	-0.384	-0.384	-0.333	-0.796***
	(-1.511)	(-1.511)	(-0.990)	(0.235)
INSIDER	-0.636**	-0.636**	0.118	-0.844***
	(-2.433)	(-2.433)	(0.439)	(0.142)
gro	0.358***	0.358***	0.236***	0.374**
	(4.699)	(4.699)	(2.896)	(0.152)
Size	-0.201***	-0.201***	0.137	-0.166***
	(-4.973)	(-4.973)	(1.014)	(0.0344)
CF	-0.0511	-0.0511	-0.00769	-0.128
	(-0.189)	(-0.189)	(-0.0572)	(0.769)
var	1.124***	1.124***	-0.102	1.995
	(2.764)	(2.764)	(-0.426)	(1.199)
lev	0.184	0.184	-1.126**	0.776**
	(0.612)	(0.612)	(-2.587)	(0.319)
LIQ	0.764**	0.764**	0.214	1.241***
	(2.060)	(2.060)	(0.583)	(0.271)
CAPEX	2.011**	2.011**	-1.087	3.257*
	(2.082)	(2.082)	(-1.424)	(1.658)
Div	0.571***	0.571***	0.258	0.760***
	(4.251)	(4.251)	(1.597)	(0.177)
Constant	-4.642***	-4.642***	-3.754***	-4.577***
	(-8.663)	(-8.663)	(-3.552)	(0.640)
Breusch-Pagan LM Test	335.86***			
Hausman Test			145.03***	
Multicollinearity (VIF)	1.63			
Wald test		2.0031***		
Wooldridge test		8.25***		
R-squared	0.399		0.175	0.635

t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

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 6.6 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.

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

Table 6.6: The Effect of Corporate Governance on Cash Holdings (Two Step System GMM)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DV= lncash							
lncash = L,	0.535***	0.534***	0.565***	0.541***	0.521***	0.510***	0.526***
	(20.00)	(20.34)	(25.08)	(20.37)	(23.03)	(20.40)	(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***	0.298***	0.259***	0.281***	0.291***	0.216***	0.257***
	(4.629)	(5.899)	(5.986)	(5.301)	(6.443)	(4.825)	(5.458)

Table 6.6(continued.)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Size	0.130**	0.115**	0.104**	0.108**	0.114**	0.0827	0.0898
	(2.291)	(2.260)	(2.038)	(2.150)	(2.146)	(1.583)	(1.464)
CF	0.0483	-0.132	-0.0810	-0.0904	-0.124	-0.0718	-0.0844
	(0.388)	(-1.188)	(-0.819)	(-0.854)	(-1.314)	(-0.678)	(-0.870)
var	-0.114	-0.241	-0.180	-0.232	-0.0685	-0.141	-0.172
	(-0.463)	(-1.088)	(-0.831)	(-1.116)	(-0.339)	(-0.737)	(-0.802)
	-	-	-	-	-	-	-
lev	1.431***	1.494***	1.451***	1.520***	1.371***	1.290***	1.397***
	(-8.311)	(-10.15)	(-8.728)	(-9.663)	(-8.208)	(-8.067)	(-9.244)
LIQ	-0.173	-0.00564	-0.141	-0.133	-0.00747	-0.144	-0.0142
	(-1.051)	(-0.0366)	(-0.890)	(-0.771)	(-0.0446)	(-0.968)	(-0.0932)
	-	-	-	-	-	-	-
CAPEX	2.298***	1.409***	1.443***	1.408***	1.441***	1.403***	1.636***
	(-7.708)	(-3.564)	(-3.808)	(-3.839)	(-4.173)	(-4.336)	(-5.234)
	-						-
Div	0.0930**	-0.0799*	-0.0832*	-0.0582	-0.0548	-0.0124	0.0958**
	(-2.087)	(-1.884)	(-1.897)	(-1.297)	(-1.402)	(-0.241)	(-2.412)
	-	-		-	-	-	-
Constant	1.680***	1.277***	-0.736*	1.072***	1.397***	1.085***	1.411***
	(-5.116)	(-4.358)	(-1.914)	(-3.897)	(-4.553)	(-3.811)	(-4.314)
Sargan Test	29.19126	38.1502	31.4763	35.3783	34.765	34.701	31.4202
	(0.7024)	(0.2863)	(0.2520)	-0.403	(0.4314)	(0.4344)	(0.5947)
Instruments valid?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	-	-	-	-	-	-	-
AR(1)	2.9664***	2.9916***	2.6249***	3.0029***	3.0151***	2.8872***	2.9694***
	(0.0030)	(0.0028)	(0.0087)	(0.0027)	(0.0026)	(0.0039)	(0.0030)
AR(2)	1.3397	1.1068	1.024	1.0127	0.9445	1.754	0.99026
	(0.1803)	(0.2684)	(0.3058)	(0.3112)	(0.3449)	(0.0794)	(0.3220)
Observations	350	354	354	354	353	352	353
Number of code	51	52	52	52	52	52	52

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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 Table 6.6. 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 fulfil the duties such as effective monitoring as required.

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 6.7 that were previously discussed in Section 3. In Column (1), the csoefficient 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 lbdbusy $*$ $EXCESS_{i,t-1}$ 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. However, the interaction bdmeet$*$ EXCASHi,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.

Table 6.7: 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)
lbnedxEXCESS	-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)
lbsizexEXCESS	0.00993	0.0147	0.0852
	(1.088)	(1.342)	(1.611)
lgenderxEXCESS	0.117	0.0888	-0.0589
	(0.927)	(0.697)	(-0.157)
lbdbusyxEXCESS	0.0218	0.0445	0.214*
	(0.464)	(1.043)	(1.819)
lbdmeetxEXCESS	0.0206**	0.0157**	0.0714*
	(2.400)	(2.182)	(1.684)
lacmeetxEXCESS	0.00675	-0.00575	0.00195
	(0.676)	(-0.678)	(0.0175)
llargexEXCESS	0.0578	0.119	1.239
	(0.941)	(0.637)	(0.972)
linsiderxEXCESS	-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)
lbnedxEXCESSxcsudden	0.182	0.110	3.402
	(0.955)	(0.769)	(0.576)
ldualxEXCESSxcsudden	0.0253	0.0232	0.120
	(0.382)	(0.515)	(0.218)
lbsizexEXCESSxcsudden	0.00730	0.00386	0.0280
	(0.642)	(0.677)	(0.210)
lgenderxEXCESSxcsudden	-0.181	-0.129	0
	(-0.803)	(-0.914)	
lbdbusyxEXCESSxcsudden	0.0368	-0.0101	0.754
	(0.339)	(-0.194)	(0.816)
lbdmeetxEXCESSxcsudden	-0.0231**	-0.0124	-0.109**
	(-2.283)	(-1.477)	(-2.388)
lacmeetxEXCESSxcsudden	-0.00320	0.0116	-0.0660
	(-0.211)	(1.284)	(-0.415)
llargexEXCESSxcsudden	-0.241*	-0.0151	-2.693
	(-1.688)	(-0.122)	(-1.229)
linsiderxEXCESSxcsudden	0.0679	0.104	0.00561
	(0.370)	(1.029)	(0.00657)
lbsizexEXCESSxcgradual	0.0598	-0.00465	1.452
	(0.537)	(-0.123)	(0.537)

VARIABLES	Pooled OLS	FE with Hetero & Serial Correlation	2-step system GMM with robust SE
lbdmeetxEXCESSxcgradual	-0.0639	0.0543	-2.187
	(-0.337)	(0.829)	(-0.498)
lind	0.0777	-0.0295	0.739
	(1.143)	(-0.340)	(1.416)
lacind	-0.00326	-0.0672	0.175
	(-0.0531)	(-1.114)	(0.780)
lbned	-0.00704	0.00733	-0.669**
	(-0.159)	(0.138)	(-2.520)
ldual	0.000771	0.00676	0.0769
	(0.0533)	(0.271)	(0.476)
lbsize	0.00629	0.00378	0.0754*
	(1.473)	(0.774)	(1.726)
lgender	0.0255	0.0487	0.117
	(0.692)	(1.317)	(0.682)
lbdbusy	-0.0260	0.0173	-0.342
	(-1.029)	(0.366)	(-0.755)
lbdmeet	-0.00102	-0.00716*	-0.00318
	(-0.358)	(-1.838)	(-0.367)
lacmeet	0.00535	0.00395	0.0157
	(1.151)	(0.819)	(0.633)
llarge	0.0455	-0.0373	0.180
	(1.482)	(-0.402)	(0.359)
linsider	0.0109	-0.0818	-0.129
	(0.318)	(-1.497)	(-0.106)
lgro	0.0667	-0.0803*	-0.0696
	(1.064)	(-1.678)	(-0.661)
lsize	-0.0101*	-0.0222	-0.120
	(-1.765)	(-1.258)	(-1.462)
lcf	0.0755**	-0.0751	-0.113
	(2.480)	(-1.451)	(-1.226)
lvar	-0.0127	0.102	-0.340
	(-0.229)	(0.913)	(-0.526)
llev	-0.00766	0.0741	0.500***
	(-0.169)	(1.202)	(2.969)
lliq	0.0682	-0.0307	0.349
	(1.037)	(-0.410)	(1.325)
ldiv	0.0280*	-0.0203*	0.0607
	(1.791)	(-1.938)	(0.883)
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

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

6.5 Robustness Check and Summary Findings

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 6.9. 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 6, 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.

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 6.8. The summary findings are then summarized in Table 6.10.

Table 6.8: Summary of Panel Data Analysis

		(1)	(2)	(3)	(4)	(5)
VARIABLES	Pooled OLS	OLS with Hetero & Serial Correlation	FE with Hetero & Serial Correlation	Fama-Macbeth	Two-step difference GMM with robust SE	Two-step system GMM with robust SE
cash = L,					0.485***	0.533***
					(4.212)	(14.88)
IND	-0.205	-0.205	0.147	-0.342	-0.952*	-0.934***
	(-0.378)	(-0.378)	(0.308)	(0.658)	(-1.843)	(-2.681)
ACIND	2.407***	2.407***	-0.289	1.704	0.281	0.193
	(4.579)	(4.579)	(-0.585)	(1.068)	(0.490)	(0.887)
BNED	0.607*	0.607*	0.933**	0.673*	0.802**	0.793*
	(1.729)	(1.729)	(2.560)	(0.343)	(2.523)	(1.901)
DUAL	0.589***	0.589***	0.142	0.726**	0.213	0.270***
	-4.998	(4.998)	(1.054)	(0.237)	(1.171)	(5.184)
BSIZE	0.129***	0.129***	0.0276	0.0832	-0.0635*	-0.0537***
	(3.903)	(3.903)	(0.641)	(0.0451)	(-1.675)	(-3.490)
GENDER	0.600**	0.600**	0.538*	0.412*	-0.162	-0.120
	(1.997)	(1.997)	(1.839)	(0.216)	(-0.548)	(-0.695)
BDBUSY	0.234	0.234	0.211	0.558***	0.333	0.301***
	(1.076)	(1.076)	(0.625)	(0.122)	(1.036)	(2.598)
BDMEET	-0.0369*	-0.0369*	0.0250	-0.000360	0.00507	-0.0202**
	(-1.784)	(-1.784)	(1.442)	(0.0297)	(0.0953)	(-1.994)
ACMEET	0.0690*	0.0690*	-0.0371	-0.00192	-0.0246	-0.0114
	(1.826)	(1.826)	(-1.148)	(0.0408)	(-0.329)	(-0.653)
LARGE	-0.384	-0.384	-0.333	-0.796***	0.883**	0.861**
	(-1.511)	(-1.511)	(-0.990)	(0.235)	(1.969)	(2.362)
INSIDER	-0.636**	-0.636**	0.118	-0.844***	0.250	-0.0710
	(-2.433)	(-2.433)	(0.439)	(0.142)	(0.454)	(-0.433)
gro	0.358***	0.358***	0.236***	0.374**	0.181	0.237***
	(4.699)	(4.699)	(2.896)	(0.152)	(1.288)	(4.807)
Size	-0.201***	-0.201***	0.137	-0.166***	0.0605	0.0559
	(-4.973)	(-4.973)	(1.014)	(0.0344)	(0.274)	(0.878)
CF	-0.0511	-0.0511	-0.00769	-0.128	0.00806	0.00694
	(-0.189)	(-0.189)	(-0.0572)	(0.769)	(0.0593)	(0.0551)
var	1.124***	1.124***	-0.102	1.995	-0.139	0.0402
	(2.764)	(2.764)	(-0.426)	(1.199)	(-0.266)	(0.154)
lev	0.184	0.184	-1.126**	0.776**	-1.341***	-1.151***
	(0.612)	(0.612)	(-2.587)	(0.319)	(-2.969)	(-6.126)
LIQ	0.764**	0.764**	0.214	1.241***	-0.425	-0.265
	(2.060)	(2.060)	(0.583)	(0.271)	(-0.582)	(-1.392)
CAPEX	2.011**	2.011**	-1.087	3.257*	-2.518***	-3.201***
	(2.082)	(2.082)	(-1.424)	(1.658)	(-3.029)	(-3.795)
Div	0.571***	0.571***	0.258	0.760***	-0.106	-0.0665
	(4.251)	(4.251)	(1.597)	(0.177)	(-0.954)	(-1.149)
Constant	-4.642***	-4.642***	-3.754***	-4.577***	-1.143	-1.088*
	(-8.663)	(-8.663)	(-3.552)	(0.640)	(-0.772)	(-1.762)

Table 6.9: Robustness Check

VARIABLES	(1) White	(2) GLS	(3) GLS-cluster firm	(4) PCSE
HOSP		-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)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6.10 Summary Findings

	Hypothesis	Supported?
6.2.1	There is a negative relationship between board independence and cash holdings	Yes
6.2.2	There is a positive relationship between board independence and cash holdings	Yes
6.2.3	There is a positive relationship between board duality and the level of cash holdings.	Yes
6.2.4	There is a significant relationship between board size and cash holdings	Yes
6.2.5	There is a positive relationship between gender diversity and cash holdings	No
6.2.6	There is a positive relationship between board busyness and cash holdings	Yes
6.2.7	There is a negative relationship between board diligence and cash holdings	No
6.2.8	There is a negative relationship between ownership structure and cash holdings	Yes

6.6 Conclusion

This study is one of the few examining the impact of corporate governance on cash holdings by hospitality firms in Malaysia and Singapore. Earlier studies were conducted by Kusnadi (2011). However, hospitality firms were not examined in details. Therefore, this study aims to fill the gap by looking into the asset-intensive sector such as hospitality.

Taking into account of a sample of 468 observations of public listed hospitality firms in Malaysia and Singapore from the year 2005 to 2013, the results indicate that board of director characteristics plays a pivotal role in corporate financial policy, such as cash holdings. Board attributes affect the levels of cash holdings. For instance, board duality is found to be significantly affecting the cash reserves. Besides, board independence and board busyness also affect corporate cash holdings. Hospitality firms with stronger board independence and busier board of directors are prone to higher corporate cash holdings. We find that contrary to previous studies, board size does not significantly impact corporate cash holdings in the context of the hospitality industry.

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.

6.6.1 Contribution and Policy Implication

This research contributes to corporate finance and governance literature. First, it adds to the literature on corporate financial policy by shedding light on corporate cash holdings among hospitality firms. Although the impact of these theories on cash holdings is extensively discussed and tested for samples of non-financial listed firms in general, knowledge about the determinants of cash holdings in hospitality firms is limited. Research on corporate cash holdings in the hospitality industry is scant except a few studies such as restaurants (Kim et al., 2011; Mun and Jang, 2015), and hotels (Morais and Silva, 2013; Ryu and Jang, 2004). Since the study was conducted in isolation, the determinants of cash holdings among hospitality firms in a more prominent picture remain vague, especially in the emerging markets.

Second, the majority of the past studies focuses mostly on the impact of cash on firm performance during stable economic conditions. The impact of tourism crises such as natural disasters, political instability, pandemics or even terrorism, however, was largely ignored in past studies. In fact, the need to accumulate cash arises especially during turbulent times (Gulati et al., 2010; Nason and Patel, 2016). Both threats and opportunities present during times of crisis. In such circumstances, managers are caught in dilemma to either hold cash to buffer against threats or to dispense the cash to capture the emerged opportunities. Cash may serve as a potential strategic deterrent and enable greater financial flexibility during the downturn. Gulati et al. (2010) argued that firms need to make strategic investments during a recession to gain quicker recovery from the downturn and to improve their financial performance. Therefore, there is a need to integrate it into the cash holdings determinants study.

Third, this study examines the effect of board effectiveness on cash holdings by taking into account the structure of the board of directors along with gender diversity and

busyness, which were not widely addressed in existing literature. Both board attributes are rarely studied in the cash literature even though it has a close relationship with the agency costs. This research is highly pertinent in the corporate world, especially for hospitality firms. Hospitality firms are under an immense amount of pressure to not only comply with strict governance principles but also to act in shareholders' best interest. This study bridges the research gap by exploring deeper into the relationship between governance and cash holdings and its impact on firm performance. Although previous studies have linked board characteristics to firm performance, limited studies examine the impact of the board characteristics with firm performance to tourism crises. Also, the board of directors is responsible for firm performance and to protect shareholders' interest and benefits. Thus, the research of the relationship between corporate governance and cash holdings in the event of a crisis is worth exploring. The results from the relationship could set a benchmark for hospitality firms to regulate the board diversity in enhancing firm performance especially in the event of uncertainties.

The findings of this study have several significant practical and academic implications. The excess cash is related to the quality of corporate governance which is costly for the firm. By holding excessive cash, it may lead to foregone interest income and have a negative impact on firm performance. Also, excess cash may worsen the problem of agency costs as managers may use the funds as a personal perquisite. The results show the essence of enhancing the role of the board of directors in improving the cash policy through corporate governance mechanisms. It will help to reduce both the direct cost and agency cost of holding cash and in firm performance. The results shall benefit various parties including the legislators and policymakers. Not only cash serves as a strategic deterrence, but also help firms to gauge opportunities.

6.6.2 Limitations and Future Research

This study has several limitations. The model was examined using a sample of public listed hospitality firms in Malaysia and Singapore. Therefore, the results may be generalized to the entire public listed hospitality firms' population in Southeast Asia and other industries. It should be seen as an exploratory study on hospitality governance. Future research would extend the study to include non-publicly traded hotels and different types of hospitality firms to compare the differences in the governance structure. Future research could also use samples from private hospitality firms to test the study the corporate cash holdings strategies and its impact on firm performance that may enhance the generalizability of this study.

CHAPTER 7: THE EFFECTS OF COUNTRY-LEVEL GOVERNANCE AND CORPORATE CASH HOLDINGS: EVIDENCE FROM HOSPITALITY FIRMS IN ASEAN-5

7.1 Introduction

The importance of corporate cash holdings coupled with the prevalence of substantial cash holdings has intrigued academics and industry practitioners in recent years. There is sizeable literature offering insights on the reason why firms hold cash.[6] Although studies that have examined cash holdings are prolific, the knowledge regarding determinants of cash holdings remains inconclusive, often resulting in conflicting findings. Extant cash holdings literature has mainly emphasized on firm-level determinants such as firm characteristics (Al-Najjar, 2013; Opler et al., 1999) and, corporate governance (Kusnadi and Wei, 2011). Despite that, findings on how these firm-level variables related to corporate cash holdings remain ambiguous.

Cash management is imperative to the hospitality industry. Past studies show that cash holdings are essential to hospitality firms since they operate in a highly competitive market in which financial and operational risks are high (Kao, 2012; Kim, Kim, & Woods, 2011). Cash holdings stimulate firm's acquisitions and business growth (Bates and Kahle, 2009), making them relevant to managers especially in the hospitality industry, who receive immense pressure from shareholders to give priority to the growth of the firm (Chathoth and Olsen, 2007). Hospitality firms face various challenges. Bharwani & Mathews (2012) did an extensive review of risk identification and analysis in the hospitality industry. The authors highlighted that asset illiquidity problem is one of the major challenges encountered by hospitality firms. Unlike others, hospitality firms tend

[6] For example: Bates & Kahle (2009); Iskandar-Datta & Jia (2012); Opler et al. (1999), Ozkan & Ozkan (2004); Wasiuzzaman (2014)

to own more fixed assets such as land, buildings, and equipment compared to firms in other industries (Jang and Ryu, 2006). Hospitality may not be able to cope with constantly changing macroeconomic environment promptly as a result of high possession in a substantial proportion of illiquid asset. Furthermore, the hospitality firms are highly leveraged. Firms are exposed to high financial risk where there is a possibility of not being able to fulfil their financial obligations. Thus, cash holdings are a key issue for the hospitality industry.

Despite the proliferation of research on cash holdings and corporate governance[7], studies in the hospitality industry remain scant. Guillet & Mattila (2010) were one of the pioneers who examine the corporate governance in the hospitality industry. Based on their findings, well-governed hospitality firms perform better. In a more recent study, Dogru & Sirakaya-Turk (2017) highlighted the need for sound corporate governance mechanism in hotel firms. Their findings show that quality of corporate governance is negatively related to the cash holdings value. Furthermore, weak corporate governance mechanisms reduce the value of cash holdings regardless of degrees of financial constraints.

Although a few cash holdings studies in hospitality industry emerge in recent years, such as restaurants (Kim et al., 2011; Mun & Jang, 2015); and hotels (Dogru & Sirakaya-Turk, 2017; Morais & Silva, 2013), the extent to which the quality of corporate governance affects corporate cash holdings in hospitality firms remain vague. Similar to mainstream corporate finance research, the majority of the literature focuses on the impact of internal, rather than the external factors on firms' cash holdings behaviours. Most literature emphasises more on managerially controllable variables. Although informative, these research fall short of delineating a holistic view of corporate cash holdings across

[7] Some of the mainstream corporate finance literature include Chen (2008); Dittmar & Mahrt-Smith (2007).

institutions. The impacts of external institutional factors on corporate cash holdings are often omitted in the existing literature. Despite the significant impact of institutional factors on corporate behaviours and strategic choices, especially in emerging economies, most studies conjectured that institutions only serve a "background" (Peng et al., 2008). Therefore, existing literature may constitute a significant shortcoming since the institutions in emerging markets vary from the developed ones (De Clercq et al., 2010). Institutions play a crucial role in shaping the firm strategies, practices and performance and affect the firm performance in emerging economies. Ignoring institutional environments in examining the determinants of cash holdings thus limit the understanding of corporate cash policy. Despite its significance, it is surprising to find that only a handful of research focuses on the institutional impact on hospitality firms. We attempt to reveal the effect of country governance on cash holdings and firm performance in hospitality firms by incorporating the institution-based view.

This study intends to narrow the gap in the current literature on corporate cash holdings by tackling the question based on the institutional perspective suggested by Peng et al. (2008). In response to Park & Jang (2014) call for research in expanding hospitality finance and managerial accounting research horizon, we included public listed hospitality firms based in ASEAN-5 and compared cash holdings behaviours among these five countries. Investor protection in Asia is weak in general (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). According to Claessens & Yurtoglu (2012), the Asian market is characterised as ineffective enforcement of shareholder rights, uncommon takeovers, and low analysts' following. Furthermore, large controlling shareholders are present in firms in emerging economies (Lee and Lee, 2009). Therefore, firms in the region are subject to less disciplinary pressure and monitoring from corporate governance mechanisms externally. As a result of ineffective enforcement, the costs of the agency are expected to be higher. The objective of this study is to bridge the gap in the literature

using cross-countries sample of public listed hospitality firms. Although the corporate cash holdings literature is voluminous, existing literature predominantly examines at firm-level, such as firm characteristic and corporate governance variables in predicting corporate cash levels. This article aims to extend that work by demonstrating the presence and importance of subnational institutions and their influence on shaping the corporate cash policy of hospitality firms embedded within the context.

The remainder of this paper is organised as follows. Section 2 discusses the theoretical framework, a brief literature review and formulation of research hypotheses. The section is followed by Section 3 where the detailed methodology adopted in this study is presented. Empirical results and discussion are discussed in Section 4. Finally, Section 5 concludes the study and indicates its theoretical and practical implications.

7.2 Theoretical framework and hypotheses development

7.2.1 Institutional Theory

Corporate cash holdings furnish a distinctive platform to test the agency implications emerging from managerial discretion (Jensen and Meckling, 1976). The agency theoretical framework suggests how corporate governance mechanism can align the interest of managers and shareholders to ensure that managers protect and maximise shareholders' wealth. Therefore, the suggested resolution tends to emphasise mainly on the interest alignment principal-agent relationship. However, traditional agency theory lacks the analytical capability to include the social embeddedness and legitimacy of corporate governance. It neglects the impacts of country governance mechanisms (Filatotchev et al., 2013; Kwan and Lau, 2011). Therefore, it does not provide a complete view of the efficacy of corporate governance strategies under various institutional context (Kumar and Zattoni, 2013).

Corporate governance mechanisms consist of two major components namely, internal and external governance. The former examines the effect of firm-level governance mechanisms. The latter focuses on governance mechanisms at country-level. These include the legal regulations of the country, stock market listing requirement, and the guidelines of the business code of conduct (Aggarwal et al., 2012). According to Narayan, Sharma, & Thuraisamy (2015), the sound legal and institutional settings is considered as an essential platform that moulds governance characteristics at the firm level.

Although institutions have long been acknowledged to be salient determinants, prior corporate governance research widely relies on the explanations of agency theory and the resource-based view. However, institutional environments affect the behaviour and performance of firms (Liu et al., 2012). Some of the studies covering country-level governance mechanisms find that countries with better shareholder rights and investor

protection have access to broader financing choices from the established financial markets. For example, Stijn Claessens & Yurtoglu (2012) argues that country-level attributes are a better predictor in explaining the differences in corporate governance. Doidge, Karolyi, & Stulz (2007) shows that firms with better governance practices can obtain better bargaining power in access to needed capital. Improved external governance thus eases the firm's access to external funds from the capital markets and enjoy better terms.

The institutional theory provides a helpful complementary lens to the agency theory. In contrast to the more classical agency theory and resource-based view, institutional theory recognises the importance of institutions (Zucker, 1987). The conceptual framework of institutional theory is much broader and deeper than agency theory. Institutional theory primarily focuses a set of formal and informal rules that affect business activity (North, 2005, as cited in Hearn 2013). Institutions affect not only the organisational routines but also help to determine the strategic choices made (Peng et al., 2008). This theoretical approach is most suitable to explain corporate practices in contexts characterised by the market with higher ownership concentration. The institutional theory thus emerges as the prevailing theory to analyse corporate behaviour in emerging markets (Peng et al., 2008). Therefore, by using institutions as the explanatory variables, the institution-based view defines firms' strategic choices and performance as linked to the economic, political, and social institutions they confront (Garrido et al., 2014; Ma et al., 2016).

7.2.2 Voice and accountability

Chen & Yang (2016) is one of the first to link democracy to corporate cash holdings. Apart from firm-level corporate governance, democracy is aimed to alleviate agency problems, especially at country-level. Democracy is a political system. There are two main players in the system. They are agent and principal. A company manager and governor serve as an agent at firm and country-level respectively, while shareholders (firm-level) and public citizens (country-level) are the principals. Agents are expected to act in the principals' best interest. The citizens are supposed to enjoy better benefits with a higher level of democracy. Similarly, the value of shareholders should be higher with better corporate governance. According to Chen & Yang (2016), corporate governance better reflects the external democratic setting with a higher level of democracy. In such cases, firms tend to comply with democratic procedures in their governance system. Therefore, there is a need for improvement of corporate governance. With good governance in place, the agency problems are expected to be less severe and thus fewer cash holdings. Thus, the following hypothesis is formulated:

Hypothesis 1. There is a negative relationship between Voice and Accountability and corporate cash holdings.

7.2.3 Government effectiveness

The role of government has emerged as an important explanatory variable on corporate cash holdings in recent years (Chen et al., 2014). A good government may be more effective in mitigating expropriation among firms. Caprio, Faccio, & McConnell (2013) take into consideration of protecting their assets from possible government expropriation when structuring the firm's assets. They argue that firms hold a lower proportion of their assets in the form of liquid assets in fear with political extraction. Thus, similar to Chen et al. (2014), a positive relationship between government quality and corporate cash holdings are expected in this study as well. When there is a high threat in political extraction, corporate insiders are likely to take measures to minimise expropriation by the government (Stulz, 2005). One of the steps includes holding less liquid assets such as cash in the firm. Since cash can be easily converted to personal benefits and harder to keep track, cash is subject to the higher possibility of expropriation compared to other assets such as fixed assets (Myers and Rajan, 1998). However, if a good government is willing to help to construct a more open and well-regulated banking sector, firms should be able to access to finance. Thus, the firm would not have to hold so much cash. This study examines how government quality helps to relieve financial constraints. The following hypothesis is thus formulated.

Hypothesis 2. Government effectiveness is negatively related to corporate cash holdings.

7.2.4 The rule of law

According to Oh & Oetzel (2011), strong and established regulatory quality and the rule of law are an essential element of country governance. For example, the rule of law can alleviate the negative impact of major disasters. Regulation quality is defined based on Kaufmann & Kraay (2008). Similarly, regulatory quality used in this study is measured based on the capability of governments to devise and execute well-constructed policies and regulations. The rule of law relates to the degree to which citizens comply with the societal rules. It also refers to the effectiveness of contracts enforcement and protection of rights (La Porta et al., 2000). On regulatory quality, governments often enact various types of regulations as precaution measures to disasters. Nevertheless, the efficacy of the measure depends on the adequacy of government implementation and enforcement. The latter is reflected in the rule of law. However, it is also the most challenging part of the regulatory process. Similar to agency theory, effective enforcement of the law is prerequisites to reducing agency costs. The following hypothesis is thus formulated:

Hypothesis 3. The rule of law has a positive effect on corporate cash holdings.

7.2.5 Political stability

Another important governance attributes are the extent of political stability in a country. Cash and cash equivalents are the most liquid asset in a firm's balance sheet. It is arguably most susceptible to political exploitation (Myers & Rajan, 1998). The more unstable the political condition in a country would lead to more uncertainties associated with doing business, vice versa. Past studies such as (Hearn and Piesse, 2013), show that political instability can lead to avoidance or decline in the level of investment by firms. Firms tend to be risk averse and avoid investment during political turbulence. In another word, firm performs better under stable conditions. Since good governance is associated with the stability and accountability of the political state of a country, firm's tendency to invest and retain cash varies. Julio & Yook (2012) study corporate investments around the time of 248 national elections in 48 countries from 1980 to 2005. Given the political uncertainty during election years, they argue that an election can have an adverse outcome for a firm. Hence, there is a value on the option of waiting to invest. The authors report that firms reduce their investments, on average, by 4.8% during political uncertainty periods, after controlling for other factors. Based on the literature and the helping hand hypothesis of political uncertainty, we predict that a firm will hold more cash to take advantage of new government officials' initiatives. It is in the best interests of a firm to respond quickly to the new initiatives. Hence, a firm will hold more cash for precautionary and speculative purposes when anticipating political uncertainty. In contrast, the grabbing hand hypothesis of politician suggests that a new government official is likely to extract assets from the firm. Political uncertainty creates the risk of extraction. Among many assets, cash is the easiest to extract. Hence, it is a good strategy to hold less cash to minimise such a risk. In sum, we do not know if the helping or the grabbing hand hypothesis prevails. Hence, whether a firm will hold more cash under political uncertainty is an empirical question. Our testable hypotheses are the following.

Hypothesis 4. During a period of political uncertainty, a firm holds more cash.

7.2.6 Control of Corruption

Good governance enhances the performance of firms when it fosters the rule of law and sound control of corruption. Corporate governance weakens as government officials appropriate for private benefit. Corruption is important in shaping corporate finance practices. According to Du (2008), corruption is associated with more prevalent ownership concentration and poor corporate governance. In addition, as investor protection and corporate governance weaken, the agency problem will be more prevalent. Besides, Aggarwal, Meschke, & Wang (2012) argue that the internal agency problems worsen as the level of political donation increase. Chen (2011) claim that levels of corruption are associated with cash holdings. They show that there is a need to hoard more cash to cushion future unexpected shocks in such countries again. In such circumstances, management may engage in corruption to secure investment projects. As the internal agency problem worsens, it is expected that corporate cash holdings will be larger especially in lower control of corruption nation.

Hypothesis 5. The level of control of corruption is negatively related to cash holdings.

7.2.7 Regulatory Quality

Another important external governance mechanism which affects the corporate behaviour is the regulatory quality of a country (Ngobo and Fouda, 2012). Regulatory quality refers to the ability of governments to enact and implement well-founded policies and regulations (Kaufmann et al., 2008). It should be negatively related to the capacity to extract private benefits of control among managers (La Porta et al., 2000). The presence of independent and strong institutions helps to improve the performance of the firm via open and equal competition. However, strong legal and judicial systems are a prerequisite to this assumption. It relies on the development of private sector which is not necessarily available in the emerging markets. According to Jalilian, Kirkpatrick, & Parker (2007), regulatory quality significantly impacts economic and business performance. As the governance and firm performance improved with the degree of regulatory quality, firms are expected to have better entry to the financial market for external financing. There is less need to maintain internal funds which lead to the following hypothesis.

Hypothesis 6. There is a negative relationship between the level of regulatory quality and cash holdings.

7.3 Methodology

7.3.1 Sample and Data

The sample includes 1274 firm-year observations from the year 2001 to 2013 among public listed hospitality firms in ASEAN-5. Similar to previous studies, financial firms are removed from the sample as they are subject to different regulatory compliance requirement, in which might affect the results (Dittmar et al. 2003). 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) for various aspects of the hospitality industry. The codes are Arts, Entertainment and Recreation (71), Accommodation and Food Services (72), Accommodation (721), Food Services and Drinking Places (722). Firm-specific annual financial data are collected from the ISI Emerging Market database (EMIS).

7.3.2 Model

We develop a set of hypotheses in section 7.2 given each dimension of country-level governance quality as captured by the Worldwide Governance Indicators (WGI). These hypotheses were also built on the evidence from Doidge et al. (2007) that highlight the significance of country-level institutional factors in the firm's ease of access to the capital markets. According to the authors, the external influence was found to be more influential than the firm-level governance. Therefore, each of the six hypotheses is formulated based on the expected link between these country governance quality measures and corporate cash holdings. We augment the cash model developed by Opler et al. (1999) by including the six dimension of governance as developed by Kaufmann et al. (2011). The model is formulated as follow:

$$Y_{it} = \alpha_0 + \alpha_1 Y_{i,t-1} + \sum_{k=1} \beta_k X_{k,it} + \mu_i + \eta_t + \varepsilon_{it}$$

(10)

Where, Y_{it} is CASH which refers to the cash holdings of firm *i* in year *t*; α_0 is the constant; α_1 and β_k represents the estimated coefficients for the variables; X is a vector of independent variables used in the model that are based on extensive literature review of the cash holdings literature and control variables. The details and descriptions of these variables are summarized in the table in Section 7.3.5; μ_i is the unobserved firm fixed effects; η_t is the time-specific effects; ε_{it} represents the error term which is assumed to be independent and identically distributed (iid). Using the measures of cash holdings and firm attributes, Equation (10) can be written as follows:

$$\begin{aligned} CASH_{it} = \beta_0 + \alpha_1 CASH_{it-1} + \beta_1 Individual\ WGI\ Dimension + \beta_2 SIZE_{it} + \beta_3 CF \\ + \beta_4 GRO_{it} + \beta_5 LEV_{it} + \beta_6 DIV_{it} + \beta_7 CAPEX_{it} + \beta_8 LIQ_{it} + \beta_9 PC_{it} \\ + \mu_i + \eta_t + \varepsilon_{it} \end{aligned}$$

(11)

$$\begin{aligned} CASH_{it} = \beta_0 + \alpha_1 CASH_{it-1} + \beta_1 WGI + \beta_2 SIZE_{it} + \beta_3 CF + \beta_4 GRO_{it} + \beta_5 LEV_{it} + \\ \beta_6 DIV_{it} + \beta_7 CAPEX_{it} + \beta_8 LIQ_{it} + \beta_9 PC_{it} + \mu_i + \eta_t + \varepsilon_{it} \end{aligned}$$

(12)

7.3.3 Dependent variable

Cash ratio is measured following the mainstream cash literature, for instance: Opler et al. (1999), Ozkan & Ozkan (2004) and Dittmar, Mahrt-Smith, & Servaes (2003) in constructing the variables. The measurement is adopted for future replication and comparability of literature purpose. Cash & cash equivalents (CASH) is used as an indicator for liquid assets; CASH is computed as the ratio of cash and equivalents divided by total assets has been employed extensively in the finance literature. The summary descriptions of the variables and measurements are detailed in the table in section 7.3.5.

7.3.4 Independent variables: Country Governance

The quality of country governance in this study is measured using WGI disseminated by the World Bank and developed by Kaufmann et al. (2011). WGI is predominantly used as a proxy for the quality of country governance. The WGI data are collected from some various established organisations and experts. The WGI project constructs aggregate indicators of six dimensions of governance. The dimensions include Control of Corruption; Rule of Law; Political Stability and Absence of Violence/Terrorism; Voice and Accountability; Government Effectiveness; and, Regulatory Quality. Each of the dimensions has a score ranging between −2.5 to 2.5. These indicators are known to have a significant impact on firm's success and performance (Ngobo and Fouda, 2012). The higher the scores indicate a better outcome. Each WGI dimension score is computed "based on hundreds of underlying individual indicators drawn from 30 organisations, based on responses from tens of thousands of citizens, enterprise managers, and experts" (Kaufmann & Kraay, 2008, p. 21). According to Globerman & Shapiro (2002), the dimension-level measures will have less measurement error compared to individual items. These indicators can capture various facets of country-level political and

governance mechanism. Thus it is a useful input to wider country-level governance and their effect on the cash holdings of hospitality firms in this study.

Consistent with prior research such as Globerman and Shapiro (2002), the correlation between these governance indicators are high. The strong correlations among these governance indicators would cause multicollinearity if we were to have all of them tested in a single regression. For this reason, each of the indicators is examined separately (Model (11). Besides, in line with Knudsen (2011), the individual indicators are combined to form an aggregate country governance index (denoted as WGI) as in Model (12). The aggregate index is constructed by adding six dimensions similar to Alon & Dwyer (2014); Knudsen (2011); Nguyen, Locke, & Reddy (2015). Aggregate scores for the WGI measure fall in the range of -15 to 15.

7.3.5 Variables measurement

Variables	Acronym	Definition	Expected sign	References	Source of data
Dependent variable					
Cash ratio	CASH	The ratio of cash and cash equivalent divide by total assets.		Al-Najjar (2013); Chen (2008); Han & Qiu (2007); Kalcheva and Lins (2007); Ozkan and Ozkan (2004).	EMIS database
Independent variables					
Country governance quality variables					
Voice and accountability	VA	Measures the degree of ability of a country's citizens to take part in their government selection, freedom of expression, freedom of association, and a free media	-	Chen & Yang (2016)	Kaufmann et al. (2011)
Government effectiveness	GE	Measures the quality of the civil service and the degree of its independence from political pressures, quality of public services, the quality of policy development and execution, and how credible the government is to commit to the policies	+	Chen et al. (2014); Dudley & Zhang (2016)	Kaufmann et al. (2011)
Rule of Law	RL	Measures the extent to which agents have confidence in and abide by the rules of society. It includes the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	+	Chen and Yang (2016); Dudley and Zhang (2016)	Kaufmann et al. (2011)
Political stability and absence of violence	PS	Measures the tendency that the government will be destabilised or overthrown by unconstitutional or violent means, which include politically-motivated violence and terrorist activities.	-	Dudley and Zhang (2016) – not significant;	Kaufmann et al. (2011)
			+	Xu, Chen, Xu, & Chan (2016)	
Control of Corruption	CC	Measures the extent to which public power is exercised for private gain, including different forms of corruption, as well as "capture" of the state by elites and private interests	-	Chen (2011); Dudley and Zhang (2016)	Kaufmann et al. (2011)

Variables	Acronym	Definition	Expected sign	References	Source of data
Regulatory quality	RQ	Measures the extent of the government to enact and execute well-constructed policies and regulations that allow and foster the development of private sector.	-	Dudley and Zhang (2016)	Kaufmann et al. (2011)
Aggregate national governance index	WGI	NGindex= Political Stability + Voice and Accountability + Government Effectiveness+ Regulatory Quality + Control of Corruption + Rule of Law. Each of the components of this index is built by Kaufmann et al. (2011).	-	Alon & Dwyer (2014); Hearn (2014); Knudsen (2011); Ngobo & Fouda (2012); Nguyen et al. (2015); Saona & San Martín (2016)	Kaufmann et al. (2011); Knudsen (2011); Nguyen et al. (2015); Ho et al., 2016)
Control variables					
Size	SIZE	Natural logarithm of total assets	-	Al-Najjar and Belghitar (2013); Ferreira & Vilela (2004); Opler et al. (1999)	EMIS database
Cash flow	CF	the earnings before tax plus depreciation & amortisation scaled by total assets	+	Al-Najjar and Belghitar (2013); Guney, Ozkan, & Ozkan (2007)	EMIS database
Net working capital	NWC	current assets minus current liabilities divided by total assets	+	Guney et al. (2007)	EMIS database
			-	Al-Najjar and Belghitar (2013); Ferreira and Vilela, (2004)	EMIS database
Capital expenditures	CAPEX	the ratio of capital expenditure to total assets.	-	Chen (2008); Guney et al. (2007)	EMIS database
Leverage	LEV	the ratio of total liabilities to total assets.	-	Al-Najjar and Belghitar (2013); Opler et al. (1999); Ozkan and Ozkan (2004)	EMIS database
Dividend	DIV	the dummy variable set equal to one in years in which a firm pays common dividends, and zero otherwise	-	Opler et al. (1999)	EMIS database
Growth opportunities	GRO	proxied using market-to-book ratio, where the market value of assets is divided by book value of assets	+	Al-Najjar and Belghitar (2013); Opler et al. (1999); Ozkan and Ozkan (2004)	EMIS database
Private Credit	PC	the ratio of claims on the private sector by commercial banks and other financial institutions to GDP		Chen (2011); Dittmar et al. (2003); Kalcheva & Lins (2007)	Worldbank

7.4 Results and Analysis

7.4.1 Descriptive analysis

Table 7.1: Summary statistics

Panel A: Summary statistics for the aggregate sample of ASEAN-5

Variable	Mean	Std.Dev.	Min	Max	Observations
Dependent variable					
CASH	0.133	0.153	0.0012	0.875	1140
LNCASH	-2.685	1.287	-6.728	-0.134	1140
Explanatory variables					
VA	-0.18	0.242	-0.7	0.5	1194
GE	1.087	0.982	-0.5	2.4	1194
RL	0.601	0.919	-1	1.8	1194
PS	0.0554	1.076	-2.1	1.3	1194
CC	0.721	1.276	-1.1	2.4	1198
RQ	0.829	0.892	-0.8	2.1	1194
Control variables					
SIZE	4.962	1.911	-0.428	9.989	1140
CF	0.0268	0.204	-2.59	2.29	1140
NWC	2.238	65.8	-3.994	2220	1140
CAPEX	0.0579	0.109	-1.112	1.027	1157
LEV	0.45	0.253	0	2.998	1140
DIV	0.623	0.485	0	1	1153
GRO	0.919	1.16	-9.06	12.15	1137

Panel B: Summary Statistics by country

Country	Malaysia	Singapore	Thailand	Indonesia	Philippines
Observations	247	494	208	208	117
CASH	0.0881	0.187	0.072	0.105	0.162
SIZE	6.181	5.240	4.751	3.583	3.695
CF	0.0136	0.0295	0.038	0.0226	0.0295
NWC	0.0850	0.265	0.041	0.101	21.16
CAPEX	0.0361	0.0537	0.076	0.0789	0.0553
LEV	0.431	0.480	0.391	0.531	0.364
DIV	0.740	0.702	0.718	0.313	0.345
GRO	0.539	0.737	1.150	1.140	1.638
VA	-0.406	-0.109	-0.237	-0.120	0
PS	0.208	1.156	-0.858	-1.121	-1.454
GE	1.098	2.171	0.300	-0.287	-0.0154
RQ	0.523	1.868	0.268	-0.368	-0.108
RL	0.500	1.627	0.00340	-0.691	-0.492
CC	0.248	2.244	-0.270	-0.760	-0.631

Table 7.1 shows the summary statistics for cash holdings and the variables. Country governance variables include the indexes of Voice and Accountability (VA), Government Effectiveness (GE), Rule of Law (RL), Political Stability & Absence of Violence (PS), Control of Corruption (CC), and Regulatory Quality, as developed by Kaufmann et al. (2008). The values for each of these six indexes range from -2.5 to 2.5. Higher values are corresponding to better governance outcomes. Panel A summarizes the statistics description for the variables used in this study. Panel B shows the correlation coefficients details for the variables. Cash holdings (CASH) is the ratio of total cash and cash equivalent to total assets. Cash flow (CF) is the earnings before tax plus depreciation & amortisation scared by total assets. Net working capital (NWC) is measured as current assets deduct current liabilities divided by total assets. Capital expenditure (CAPEX) is the ratio of capital expenditure to total assets. Leverage (LEV) is the ratio of total liabilities to total assets. Dividend (DIV) is the dummy variable which is set to be equal to 1 in years in which a firm pays common dividends, otherwise 0. Growth Opportunities (GRO) is proxied using market-to-book ratio. *, **, and *** indicate statistical significance level at the 10%, 5%, and 1% respectively. This table presents the descriptive statistics based on aggregate samples. The variables are as defined in the table in Section 7.3.5. Financial data are downloaded from Emerging Market Information System (EMIS) database. Worldwide Governance Indicators (WGI) are constructed by Kaufmann et al. (2011) and available from World Bank database[8].

[8] http://data.worldbank.org/data-catalog/worldwide-governance-indicators

Table 7.2: Cross-country summary statistics of country governance index

Country	VA	GE	RL	PS	CC	RQ	GOVERN	HVA	HE	HRL	HPS	HCC	HRQ	HGOVERN
Malaysia	-0.5	1.1	0.5	0.1	0.3	0.5	2.0	0	1	1	1	1	1	1
Singapore	-0.1	2.2	1.6	1.2	2.2	1.8	8.9	1	1	1	1	1	1	1
Thailand	-0.4	0.3	-0.1	-1.1	-0.3	0.2	-1.4	0	0	0	0	0	0	0
Indonesia	-0.1	-0.3	-0.7	-1.1	-0.7	-0.3	-3.2	1	0	0	0	0	0	0
Philippines	0	0	-0.5	-1.6	-0.6	-0.1	-2.8	1	0	0	0	0	0	0
Aggregate	-0.22	0.66	0.16	-0.5	0.18	0.42	0.7							

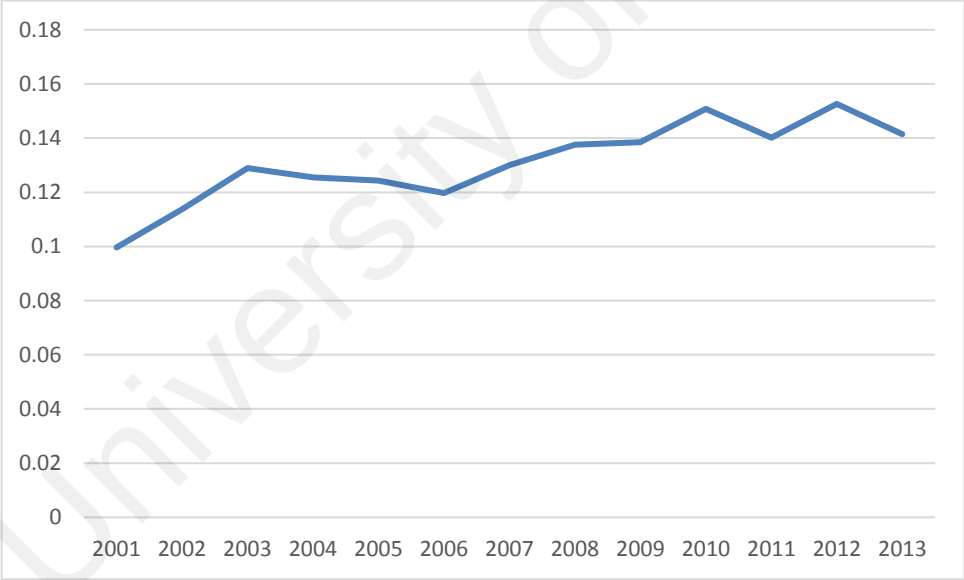


Figure 7.1 Cash Holdings Trend of Hospitality Firms in ASEAN-5 (2001-2013)

7.4.2 Country governance and cash holdings

Table 4.3 reports empirical results from estimating Equation (2). All tested models are estimated using the Arellano and Bond dynamic panel. Two-step system GMM method is estimated using the Stata "xtabond2" command to control potential sources of endogeneity. Hansen test and Arellano-Bond test for serial correlation had been carried out, and the p-values are reported. T-statistics are reported in the parentheses. Whereas the significance level is indicated by *, ** and *** with 10%, 5% and 1% significance levels respectively. Z-Statistics are shown in parentheses. Based on the F-statistics, the explanatory variables are jointly significant in all regression models. Instrument validity is also carried out. It shows significant results when it is regressed on the instrument variables. The Sargan test of over-identification on restrictions also confirms that the instruments are valid. Similarly, Hausman test is carried out to test the non-significance of these instruments by running the residuals from a regression on all the variables of the model.

Table 4.4 shows the relationship of corporate cash holdings to the quality of country governance. The findings are consistent with previous studies (Dittmar et al., 2003; Opler et al., 1999) where there is a positive relationship between firm size and cash holdings level in low control of corruption countries. However, such impact is not observed in countries with higher control of corruption. The results imply that higher cash holdings are more prevalent in countries with lower quality of governance. Contrarily, firms hold lesser cash in the high quality of governance countries as they have better access to the financial markets. This effect is elevated even more with higher control of corruption.

Next, there is a positive relationship between growth opportunities and level of cash. It indicates greater need to hold cash as firms have greater growth opportunities. On the other hand, cash flow plays a minimal role as cash holdings determinants in countries

with low quality of country governance. Nevertheless, it has an adverse impact on cash in countries with a higher quality of country governance (Dittmar et al., 2003).

Private credit, on the other hand, is a proxy for the depth of the debt market, is positively related to corporate cash holdings in countries with the low quality of country governance. When a country has good governance quality, firms tend to hold more cash. The results imply the possibility that firms tend to maintain higher cash reserves when the financial market is more accessible and developed. There is a negative relationship between leverage and corporate cash holdings. Leverage may serve as a substitute. Dividend-paying firms appear to hold more cash in countries with the low quality of country governance, vice versa. The coefficient sign of net working capital is negative, thus confirming that it serves as a cash substitute.

7.4.3 Value of cash holdings

Table 7.8 reports the association of firm value to cash holdings. It also presents the findings on the influence of the country governance quality on the relationship. Models are adopted following Dittmar and Mahrt-Smith (2007) with the addition of the country governance factors. In column 2 and 3, a comparison between a country with high vs low country governance is made. When the interaction variable such as VA, GE, RL, PS, CC, RQ, and aggregate WGI is included, the coefficient of CASH becomes negative. Based on the results, it implies enhancement of firm value depends on the quality of country governance. Notably, holding excessive cash may hurt the firm value. However, effective country governance may alleviate the negative effect of excess cash especially when country governance is sufficiently effective (HGOVERN).

There is a need to hold a higher level of cash in less developed markets. However, excess cash may harm the value of the firm. This can be overcome by better country

governance. Similar findings can be seen in Column 3. In this case, a dummy variable of H is used to measure each governance components. The coefficient of CASH reported negative and significant. A significant and positive coefficient is also observed from the interaction variable HGOVERN x CASH.

In a nutshell, the results show that cash may harm firm value in countries with low country governance. However, such adverse effect can be alleviated when governance is enhanced and improved. On the other hand, excess cash contributes to the firm value in countries with high country governance. Results support the formulated hypotheses. In addition, a robustness test is performed. Results are consistent with the previous models.

7.4.4 Robustness check and summary

Based on Petersen (2009), panel data analysis should adjust to the standard errors for possible dependence in the residuals. If the residuals in the panel data sets are correlated across firms or across time, then the standard errors estimated can be biased. As such, In the effort to provide support to the robustness of results for this study, different adjusted standard errors are compared to consider the possibility of the existence of time and the firm effects. As shown in Table 7.3, the different adjusted standard errors are not widely deviated among each other. This is one of the criteria indicating a large robustness of results. White corrected standard errors and panel corrected standard errors are included for comparison purposes. The findings are similar to the results presented in earlier sections.

Table 7.3: Robustness Check

VARIABLES	(1) White	(2) GLS	(3) GLS-cluster firm	(4) FGLS
VA	-0.321	-0.385	-0.385	-1.133
	(0.503)	(0.479)	(0.478)	(0.801)
PS	0.129	0.154	0.154	-0.0412
	(0.182)	(0.212)	(0.173)	(0.309)
GE	0.0481	-0.164	-0.164	-0.257
	(0.617)	(0.529)	(0.589)	(0.846)
RQ	-0.118	-0.0138	-0.0138	0.472
	(0.571)	(0.541)	(0.532)	(0.911)
RL	0.855	0.855	0.855	0.932
	(0.616)	(0.605)	(0.621)	(1.029)
CC	-0.0309	-0.146	-0.146	-0.618
	(0.385)	(0.379)	(0.340)	(0.616)
Crisis	-0.647	-0.966	-0.966	-0.902
	(0.745)	(0.859)	(0.647)	(1.469)
crisisxva	-0.0406	-0.101	-0.101	0.0208
	(0.643)	(0.532)	(0.597)	(0.936)
crisisxps	-0.233	-0.277	-0.277	-0.326
	(0.267)	(0.264)	(0.268)	(0.462)
crisisxge	0.788	0.969	0.969	0.567
	(0.638)	(0.642)	(0.656)	(1.107)
crisisxrq	-0.221	-0.486	-0.486	-0.893
	(1.307)	(1.106)	(1.233)	(1.895)
crisisxrl	-0.0896	-0.171	-0.171	0.660
	(0.887)	(1.056)	(0.837)	(1.822)
crisisxcc	-0.219	-0.125	-0.125	-0.118
	(0.696)	(0.571)	(0.657)	(0.994)
Constant	-5.405	-2.702	-2.702	-6.609**
	(4.595)	(1.882)	(1.827)	(3.199)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7.4: Results of dynamic panel GMM estimations. Dependent variable: lncash

VARIABLES	1	2	3	4	5	6	7
lncash							
L.lncash	0.471***	0.469***	0.468***	0.473***	0.471***	0.469***	0.472***
	-59.7	-53.58	-54.92	-58.21	(59.60)	-57.17	(65.86)
size	-0.0905***	-0.0825***	-0.0917***	-0.0739***	-0.0895***	-0.0776***	-0.0751***
	(-5.812)	(-5.775)	(-6.063)	(-5.019)	(-6.056)	(-5.728)	(-5.765)
cf	0.149***	0.174***	0.168***	0.163***	0.162***	0.169***	0.165***
	-3.318	-4.397	-3.787	-4.15	(3.680)	-4.224	(4.184)
nwc	0.000423***	0.000439***	0.000422***	0.000441***	0.000420***	0.000442***	0.000437***
	-33.2	-33.33	-33.01	-32.92	(29.56)	-37.14	(32.76)
capex	-0.397***	-0.334***	-0.378***	-0.310***	-0.347***	-0.328***	-0.325***
	(-4.382)	(-4.319)	(-4.300)	(-4.837)	(-3.821)	(-3.816)	(-4.111)
lev	-0.307***	-0.282***	-0.283***	-0.302***	-0.309***	-0.291***	-0.289***
	(-3.962)	(-3.782)	(-3.955)	(-3.633)	(-4.056)	(-3.796)	(-3.816)
div	-0.037	-0.0388	-0.0402*	-0.0394	-0.0338	-0.0411	-0.0435*
	(-1.578)	(-1.504)	(-1.731)	(-1.483)	(-1.349)	(-1.567)	(-1.678)
gro	-0.0119**	-0.0130**	-0.00953	-0.0151***	-0.00856	-0.0130**	-0.0135**
	(-1.975)	(-2.172)	(-1.492)	(-2.790)	(-1.383)	(-2.389)	(-2.347)
va	-0.115***						
	(-2.810)						
ge		-0.0778*					
		(-1.870)					
rl			0.0498				
			-1.397				
ps				-0.141***			
				(-9.074)			
cc					0.0341		
					(0.979)		
rq						-0.109**	
						(-2.478)	
wgi							-0.0225***

VARIABLES	1	2	3	4	5	6	7
							(-3.294)
Constant	-0.824***	-0.773***	-0.857***	-0.865***	-0.850***	-0.788***	-0.810***
	(-12.46)	(-11.96)	(-12.95)	(-12.34)	(-13.31)	(-12.78)	(-12.87)
Observations	1,023	1,023	1,023	1,023	1,023	1,023	1,023
Number of code	98	98	98	98	98	98	98
F-stastistics	33.785***	32.645***	33.134***	34.398***	33.081***	33.737***	34.421***
Wald Chi-Squared statistics	15213.42***	11502.67***	16026.92***	13633.5***	14814.02***	14694.08***	14475.97***
Sargan test of overidentifying restrictions	81.1453	81.24984	80.90933	79.4206	80.23118	79.68663	80.11559
	(0.3220)	(0.3191)	(0.3286)	(0.3717)	(0.3479)	(0.3638)	(0.3513)
Arrelano-bond test for AR(1)	-4.6989	-4.6969	-4.6412	-4.6448	-4.5888	-4.6219	-4.6341
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Arrelano-bond test for AR(2)	-0.53376	-0.58462	-0.43338	-0.47146	-0.46579	-0.43229	-0.46271
	(0.5935)	(0.5588)	(0.6647)	(0.6373)	(0.6414)	(0.6655)	(0.6436)

Table 7.5 Impact of High Quality of Country Governance on Cash Holdings

VARIABLES	1	2	3	4	5	6	7
DV= lncash							
L.lncash	0.447***	0.457***	0.440***	0.440***	0.445***	0.443***	0.445***
	(26.22)	(32.40)	(30.09)	(26.26)	(28.14)	(27.91)	(27.23)
size	-0.0681***	-0.0699***	-0.0739***	-0.0435**	-0.0742***	-0.0599***	-0.0613***
	(-4.210)	(-4.215)	(-4.466)	(-2.552)	(-4.520)	(-3.510)	(-3.765)
cf	0.133***	0.162***	0.148***	0.166***	0.124***	0.142***	0.132***
	(3.067)	(3.964)	(3.257)	(4.139)	(2.670)	(3.488)	(3.324)
nwc	0.000451***	0.000479***	0.000461***	0.000494***	0.000444***	0.000475***	0.000470***
	(27.02)	(31.26)	(28.20)	(31.75)	(23.76)	(27.66)	(29.75)
capex	-0.322***	-0.306***	-0.367***	-0.265***	-0.298***	-0.244***	-0.303***
	(-3.714)	(-3.195)	(-4.507)	(-3.311)	(-3.579)	(-2.921)	(-4.086)
lev	-0.358***	-0.266***	-0.320***	-0.347***	-0.368***	-0.323***	-0.322***
	(-3.296)	(-2.786)	(-3.288)	(-3.052)	(-3.639)	(-3.069)	(-3.080)
div	-0.0488*	-0.0312	-0.0254	-0.0148	-0.00450	-0.0221	-0.0161
	(-1.832)	(-1.219)	(-1.101)	(-0.552)	(-0.187)	(-0.850)	(-0.622)
gro	-0.0185***	-0.0166***	-0.0132**	-0.0244***	-0.00948*	-0.0168***	-0.0176***
	(-3.608)	(-3.119)	(-2.562)	(-4.682)	(-1.774)	(-3.381)	(-3.464)
pc	-0.00793***	-0.00811***	-0.0103***	-0.00972***	-0.00939***	-0.00980***	-0.00947***
	(-7.684)	(-8.066)	(-11.22)	(-8.881)	(-10.72)	(-10.14)	(-10.31)
va	-0.538***	0.113*	0.216***	-0.154***	0.187***	0.0697	-0.00700
	(-6.782)	(1.675)	(3.193)	(-4.645)	(3.956)	(1.239)	(-0.630)
hva	0.234***						
	(7.201)						
hge		-0.256**					
		(-2.368)					
hrl			-0.0408				
			(-0.484)				

VARIABLES	1	2	3	4	5	6	7
hps				0.103			
				(1.134)			
hcc					-0.153***		
					(-3.912)		
hrq						-0.0301	
						(-0.983)	
hgovern							0.103
							(1.455)
Constant	-0.450***	-0.231**	-0.194**	-0.312***	-0.227***	-0.226***	-0.215***
	(-4.637)	(-2.389)	(-2.280)	(-3.313)	(-3.079)	(-2.803)	(-2.585)
Observations	1,023	1,023	1,023	1,023	1,023	1,023	1,023
Number of code	98	98	98	98	98	98	98

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7.6: Robustness Check- Impact of High Quality of Country Governance on Cash Holdings (Dependent Variable: CASH)

VARIABLE	1	2	3	4	5	6	7
DV= cash							
L.cash	0.407***	0.405***	0.400***	0.408***	0.403***	0.403***	0.404***
	(49.70)	(46.53)	(43.11)	(51.81)	(43.58)	(46.70)	(48.45)
size	-0.0469***	-0.0456***	-0.0480***	-0.0467***	-0.0499***	-0.0476***	-0.0466***
	(-32.07)	(-32.99)	(-29.91)	(-36.02)	(-30.85)	(-32.58)	(-37.36)
cf	0.0379***	0.0330***	0.0346***	0.0314***	0.0316***	0.0347***	0.0364***
	(11.63)	(9.559)	(6.940)	(6.469)	(7.865)	(6.559)	(10.25)
nwc	0.000236***	0.000239***	0.000234***	0.000238***	0.000232***	0.000235***	0.000236***
	(91.60)	(82.10)	(89.48)	(98.47)	(91.99)	(94.44)	(97.99)
capex	-0.0714***	-0.0798***	-0.0693***	-0.0650***	-0.0819***	-0.0702***	-0.0709***
	(-6.919)	(-6.386)	(-4.907)	(-5.289)	(-7.824)	(-5.033)	(-5.730)
lev	-0.0650***	-0.0610***	-0.0663***	-0.0666***	-0.0646***	-0.0639***	-0.0644***
	(-11.34)	(-9.817)	(-7.918)	(-9.981)	(-7.705)	(-8.127)	(-8.797)
div	-0.0172***	-0.0145***	-0.0174***	-0.0142***	-0.0160***	-0.0177***	-0.0174***
	(-6.703)	(-5.734)	(-7.446)	(-6.437)	(-6.002)	(-7.227)	(-7.688)
gro	-0.00148***	-0.00188***	-0.000330	-0.00208***	-0.000164	-0.000934**	-0.00105***
	(-4.629)	(-4.512)	(-0.789)	(-5.199)	(-0.490)	(-2.426)	(-2.965)
pc	-0.00167***	-0.000796***	-0.00197***	-0.00158***	-0.00210***	-0.00197***	-0.00175***
	(-24.10)	(-8.357)	(-18.33)	(-21.13)	(-20.05)	(-18.00)	(-18.19)
va	-0.0491***						
	(-8.441)						
hva	0.0362***						
	(9.665)						
ge		0.0510***					
		(5.123)					
hge		-0.242***					
		(-8.775)					
rl			0.0553***				

VARIABLE	1	2	3	4	5	6	7
			(7.385)				
hrl			-0.0545***				
			(-5.049)				
ps				-0.00942***			
				(-4.206)			
hps				-0.0291***			
				(-4.815)			
cc					0.0394***		
					(10.62)		
hcc					-0.00514		
					(-1.147)		
rq						0.0354***	
						(6.625)	
hrq						-0.0172***	
						(-9.631)	
govern							0.00283***
							(2.691)
hgovern							-0.0284***
							(-2.821)
Observations	1,023	1,023	1,023	1,023	1,023	1,023	1,023
Number of code	98	98	98	98	98	98	98

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7.7: Robustness Check- Impact of High Quality of Country Governance on Cash Holdings (Dependent Variable: CASH1)

VARIABLE	1	2	3	4	5	6	7
cash1							
L.cash1	0.614***	0.584***	0.600***	0.620***	0.569***	0.588***	0.598***
	(512.3)	(531.4)	(756.6)	(565.4)	(430.1)	(511.5)	(544.3)
size	-0.0323***	-0.0450***	-0.0348***	-0.0258***	-0.0362***	-0.0321***	-0.0321***
	(-24.11)	(-27.59)	(-28.75)	(-28.00)	(-19.89)	(-16.17)	(-18.48)
cf	0.657***	0.638***	0.654***	0.661***	0.638***	0.651***	0.653***
	(108.3)	(100.4)	(112.7)	(137.8)	(87.08)	(121.0)	(112.3)
nwc	-0.000132***	-0.000127***	-0.000111***	-0.000115***	-0.000117***	-0.000125***	-0.000113***
	(-28.20)	(-20.81)	(-15.79)	(-23.58)	(-16.64)	(-16.45)	(-19.52)
capex	-0.271***	-0.272***	-0.292***	-0.253***	-0.319***	-0.245***	-0.262***
	(-19.11)	(-22.14)	(-23.07)	(-19.67)	(-22.43)	(-19.20)	(-20.55)
lev	-0.157***	-0.150***	-0.158***	-0.149***	-0.153***	-0.152***	-0.151***
	(-18.63)	(-16.27)	(-19.90)	(-22.89)	(-14.45)	(-15.95)	(-16.77)
div	-0.0928***	-0.0933***	-0.0915***	-0.0977***	-0.0784***	-0.0924***	-0.0950***
	(-44.11)	(-35.06)	(-44.65)	(-51.39)	(-32.08)	(-56.54)	(-42.62)
gro	-0.00479***	-0.00464***	-0.00133*	-0.00308***	-0.00213***	-0.00340***	-0.00214***
	(-7.093)	(-5.853)	(-1.840)	(-3.913)	(-3.061)	(-4.776)	(-2.812)
pc	0.00627***	0.00168***	0.00447***	0.00555***	0.00269***	0.00301***	0.00409***
	(33.34)	(7.627)	(30.34)	(43.89)	(14.33)	(15.07)	(30.00)
va	-0.308***						
	(-20.35)						
hva	0.151***						
	(22.26)						
ge		0.0347**					

VARIABLE	1	2	3	4	5	6	7
		(2.353)					
hge		1.225***					
		(19.69)					
rl			0.410***				
			(46.70)				
hrl			-0.316***				
			(-22.58)				
ps				0.150***			
				(25.77)			
hps				-0.245***			
				(-17.91)			
cc					0.437***		
					(42.83)		
hcc					-0.0744***		
					(-10.55)		
rq						0.519***	
						(38.95)	
hrq						-0.125***	
						(-32.75)	
govern							0.0831***
							(40.41)
hgovern							-0.248***
							(-16.23)
Observations	1,023	1,023	1,023	1,023	1,023	1,023	1,023
Number of code	98	98	98	98	98	98	98

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7.8: The relationship between WGI, Cash Holdings and Firm Value (Two-step system GMM)

VARIABLES	1	2	3
mtb			
L.gro	0.396***	0.381***	0.377***
	(136.7)	(137.0)	(123.5)
size	-0.107***	-0.109***	-0.114***
	(-15.65)	(-15.46)	(-16.05)
cf	-0.375***	-0.350***	-0.323***
	(-15.80)	(-16.33)	(-15.20)
capex	0.908***	0.918***	0.886***
	(24.95)	(20.65)	(15.15)
lev	-0.858***	-0.877***	-0.883***
	(-34.09)	(-32.86)	(-28.52)
div	-0.0848***	-0.0646***	-0.0787***
	(-5.496)	(-3.519)	(-4.740)
pc	-0.00543***	-0.00460***	-0.00547***
	(-6.604)	(-5.414)	(-6.592)
cash	1.325***	1.596***	2.100***
	(23.25)	(33.18)	(30.55)
govern	-0.0618***		
	(-12.64)		
governxcash		-0.134***	
		(-18.35)	
hgovernxcash			-1.701***
			(-20.14)
Constant	1.809***	1.779***	2.007***
	(24.90)	(26.50)	(36.75)
Observations	1,030	1,030	1,030
Number of code	98	98	98

7.5 Conclusion

Our research has two major contributions. Firstly, this study contributes to existing cash literature by looking beyond commonly used determinants. We integrate the cash literature and institution-based views to study the factors that influence a firm's tendency to hoard cash. Through this analysis, we contribute to the emerging literature that uses external governance mechanism variables, such as government quality and cash holdings (Chen et al., 2014); democracy and law (Chen & Yang, 2016); securities legislation and control of corruption (Chen, 2011) to uncover determinants of cash holdings. Like these studies, we include six dimensions of the country governance quality (Kaufmann et al., 2011) as which include: The regulatory quality, the rule of law, control of corruption, government effectiveness, voice and accountability; political stability and absence of violence & terrorism. Secondly, this study contributes further evidence that country-level governance is an essential factor which affects the corporate cash policy, particularly in the hospitality industry. With this analysis, this study provides additional insight into cash literature by including country-level governance as defined by Kaufmann et al. (2011) to uncover the determinants of cash holdings. The variables include Voice and accountability; government effectiveness; control of corruption; political stability & absence of violence or terrorism; the rule of law; and, the regulatory quality. The results of this study will serve as a guide for researchers, practitioners and policymakers. Firms determine the level of cash holdings based on their degrees of financial constraints and the quality of corporate governance mechanisms. The adopted business model can further affect the perceived value of cash holdings. Hospitality firms can better devise cash management and cash holding strategies depending on their investment models. The results can potentially guide hotel firms' decision either via expansion through franchising or corporate-owned divisions.

This study has several limitations. Since this study is limited to public firms in the hospitality industry, the results cannot be generalised to the entire hospitality industry. Future research could use samples from private firms to study the corporate cash holdings strategies and its impact on firm performance, which will help improve the generalizability of this study.

CHAPTER 8: SUMMARY AND CONCLUSION

8.1 Introduction

This chapter summarises and concludes this study. Section 8.2 reviews the three research questions and their associated hypotheses, and their test results. Section 8.3 delineates this study's major contributions, followed by a discussion of the implications of the study's findings. Section 8.4 discusses the study's limitations, followed by suggestions for future research.

8.2 Review of the Research Questions, Hypotheses, and Main Findings

There are three major objectives of this study. The first is to assess the factors influencing the corporate cash holdings among public listed hospitality firms. The second is to examine the impact of cash holdings on firm performance and third, to assess the effect of country-level governance on cash holdings. To achieve the above objectives, this study formulates three research question motivated by existing research gaps uncovered in the literature survey in Chapter 3. The first research question (RQ1) of this study is: What are the determinants of corporate cash holdings among hospitality and non-hospitality firms in Malaysia? The second research question (RQ2) examines the impact of cash holdings decisions towards firm performance. Moreover, third, to find out what are the impacts of country-level governance on corporate cash holdings?

Panel regression analysis was carried out, and results show that corporate governance plays a major role in corporate cash holdings. Board of directors is found to be very crucial as part of the internal governance mechanism for the corporation.

8.3 Contribution and Policy Implication

This research contributes to corporate finance and governance literature. First, it adds to the literature on corporate financial policy by shedding light on corporate cash holdings among hospitality firms.

The previous literature points out that there is a substantial variation of liquidity across industry groups. The difference in cash level maintained in companies varies from industry to industry mainly due to distinct operational requirement and transaction demand for cash in different lines of business. Damodaran (1997) thus suggests that there are industry effects associated with liquidity and the demand for liquidity varies across industries. Since the industry effects exist, the need to study the corporate cash holdings of firms in the hospitality industry is called-for.

The impact of these theories on cash holdings is extensively discussed and tested for samples of non-financial listed firms in general, but knowledge about the determinants of cash holdings in hospitality firms is limited. Research on corporate cash holdings in the hospitality industry is scant except a few studies such as restaurants (Kim et al., 2011; Mun and Jang, 2015), and hotels (Morais and Silva, 2013; Ryu and Jang, 2004). Since the study was conducted in isolation, the determinants of cash holdings among hospitality firms in a bigger picture remain vague, especially in the emerging markets.

Second, the majority of the past studies focuses largely on the impact of cash on firm performance during stable economic conditions. The impact of tourism crises such as natural disasters, political instability, pandemics or even terrorism, however, was largely ignored in past studies. In fact, the need to accumulate cash arises especially during turbulent times (Gulati et al., 2010; Nason and Patel, 2016). Both threats and opportunities present during times of crisis. In such circumstances, managers are caught in dilemma to either hold cash to buffer against threats or to dispense the cash to capture

the emerged opportunities. Cash may serve as a potential strategic deterrent and enable greater financial flexibility during the downturn. Gulati et al. (2010) argued that firms need to make strategic investments during a recession in order to gain quicker recovery from the downturn, and to improve their financial performance. Therefore, there is a need to integrate it into the cash holdings determinants study.

Third, this study contributes to a growing body of research related to the board effectiveness and its relation to cash holding decisions, in particular on the effect of boards' key features. Firms in ASEAN provide a natural laboratory to study these effects. The majority of ASEAN firms have concentrated ownership and poor minority shareholder protection. By taking into account such firm dynamics, we can extend our knowledge on how the ownership characteristics, from an agency theoretical perspective, can affect the level of cash holdings. The findings from this study provide better insights and can be applied to other corporate strategies and policies especially among firms with similar ownership structures. Furthermore, this study examines the effect of board effectiveness on cash holdings by taking into account the structure of the board of directors along with gender diversity and busyness, which were not widely addressed in existing literature. Both board attributes are rarely studied in the cash literature even though it has a close relationship with the agency costs. This research is highly pertinent in the corporate world, especially for hospitality firms. Hospitality firms are under an immense amount of pressure to not only comply with strict governance principles but also to act in shareholders' best interest. This study bridge the research gap by exploring deeper into the relationship between governance and cash holdings and its impact on firm performance. Although previous studies have linked board characteristics to firm performance, limited studies examine the impact of the board characteristics with firm performance to tourism crises. Also, the board of directors are responsible for firm performance and to protect shareholders' interest and benefits. Thus, the research of the

relationship between corporate governance and cash holdings in the event of a crisis is worth exploring. The results from the relationship could set a benchmark for hospitality firms to regulate the board diversity in enhancing firm performance especially in the event of uncertainties.

Fourth, this study extends to cash literature investigating the determinants of corporate cash holdings by identifying another important reason for firms to hold cash: country governance. Cash holding policy cannot only effectively reflect firms' operating and financial strategies, but also is closely related to corporate governance and external environment. Existing literature rely mainly on agency theory. Agency theoretical framework has tried to explain the relationship between shareholders and management, seeking to align the interest of managers and shareholders with appropriate corporate governance mechanism (Jensen and Meckling, 1976). However, agency theory may not provide a full account of cash holdings decisions (Lu et al., 2009). Although enhancing governance mechanisms at the firm level is important in alleviating agency problems within the firm, improving the governance mechanism at the country-level first can be equally important. According to Chen & Yang (2016), country-level governance is more effective and efficient in improving corporate governance. This study is consistent with a growing stream of research that demonstrated how corporate behaviours across countries are influenced by national institutions (Brouthers, 2002; Crossland and Hambrick, 2011; Deephouse et al., 2016; Liou et al., 2016; Nell et al., 2015; Peng et al., 2008; Wu et al., 2015). Therefore, this study argues that institutional theory is an appropriate lens for explaining differences in corporate cash holdings across countries. With this analysis, this study contributes to the relatively recent literature by including country-level governance as defined by Kaufmann, Kraay, & Mastruzzi, (2011) to uncover the determinants of cash holdings. The variables include Voice and

accountability; government effectiveness; political stability & absence of violence or terrorism; control of corruption; the rule of law; and, the regulatory quality.

Fifth, this study examines cash holdings in the context of Asia, especially in ASEAN region. While much academic research has looked at corporate governance in other emerging markets, cash holdings studies in the ASEAN region has been scant. Unlike developed economies, public corporations in East Asia typically have low disclosure quality. The degree of business activity and corporate practices may be largely attributable to the institutional conditions in emerging markets. (De Clercq et al., 2010). Corporate ownership is highly concentrated in ASEAN (Fan and Wong, 2002). Wealth is concentrated among a few families (Claessens, Djankov and Lang, 2000). Thus, ASEAN provides a unique and ideal laboratory within which to study the corporate governance and corporate financial policy.

Last but not least, this study also has a methodological contribution. There are ample findings in the literature that firms have a target level of cash holdings that they continuously adjust to. Therefore, unlike the previous studies that used the ordinary least squares regression, this study uses dynamic panel data model to carry out all examinations. Dynamic models help to control for endogeneity and to reduce the risk of obtaining biased results due to the correlation between independent variables and the error term.

This study‘s findings have the following implications. This study’s findings have important consequences for the firms’ shareholders and creditors. The excess liquidity associated with quality of corporate governance is costly for the firm in the sense that it leads to foregone interest income withholding of cash and negative impact on firm performance. Also, excess liquidity heightens the agency costs because it facilitates managers’ use of funds for the personal purpose. The results show the importance of

enhancing the role of the board of directors in improving the liquidity policy through corporate governance mechanisms. It will help to reduce both the direct cost and agency cost of holding cash and in profitability.

Its empirical evidence for the effect of strong internal governance mechanism has policy implication for the regulatory stock market agency in ASEAN-5 especially in the enhancing of each country's corporate governance code. This policy implication is crucial for assessing the listing requirement regulation. Listed issuer and its directors are required to comply with the requirements of maintaining sound corporate governance. These include constructing a feasible policy on board composition and board diversity. The requirement includes having a mix of skills, independence and diversity (including gender diversity).

This study's findings on the determinants of cash holdings in ASEAN-5 may help shareholders and regulators to assess the impact of such variables (firm's characteristics, audit factors and earnings quality) on improving the corporate liquidity policy in public listed companies in this region. In addition, there is a significant relationship between cash holdings and corporate governance. Thus, careful monitoring of the cash level is crucial.

Besides, the results give an insight into corporate risk management. It is becoming increasingly important for hospitality firms to have an awareness of the internal and external risks inherent in the business to build business resilience and, to gain competitive advantage; analysing and assessing risks while formulating their business strategies. It has become imperative for hospitality firms to shift their focus from merely responding and reacting to crises and emergency situations, to proactively analysing and assessing risks while formulating their business strategies.

Impact of crisis is also investigated. It is known that resource allocation decisions are especially tough during a recession. Although cash reserves serve as a buffer against unexpected shocks, excessive cash may imply greater agency problem. The findings report shows that cash holdings may also harm firm value. But the effect is subject to the governance quality at both firm and country level. As such, the findings give an important insight on determining optimal cash holdings to achieving maximum firm value and performance. This study highlights the need to consider the potential benefits of cash holdings. The results shall benefit various parties including the legislators and policymakers. Not only it serves as strategic deterrence, but also help firms to gauge opportunities.

8.4 Limitations and Future Research

This study has several limitations. The model was tested on a sample of public listed hospitality firms in Malaysia. The results cannot be generalised to the entire hospitality industry (including non-public listed hospitality firms) population in ASEAN and other industries. It should be seen as an exploratory study on hospitality governance. Future research would extend the study to include non-public listed hotels and different types of hospitality firms to compare the differences in the governance structure. Another limitation is that this study did not attempt to explore other governance variables, such as board tenure and board processes. This restriction related to firm performance is suggested directions for future research.

Since the mid-1990s, South East Asia has experienced some crises triggered by a variety of occurrences. These include the 1997 Asian financial crisis; the 2004 Indian Ocean tsunami; regional conflicts, the threat and incidents of terrorism and the 2003 SARS (Severe Acute Respiratory Syndrome) epidemic and subsequent outbreaks of

Avian influenza (bird flu) and H1N1 (swine flu). In certain cases, these resulted in sharp declines in international tourist arrivals throughout South East Asia and threatened the sustainability of some tourism businesses and destinations. The role of cash remains unclear in association with the crisis. This study represents an initial investigation of the determinants of corporate cash holdings and its implication in the hospitality industry specifically. Future studies can expand the understanding of hospitality cash holding by investigating the board of directors' role and cash in times of crisis and natural disasters.

Since this study is limited to public firms in the hospitality industry, the results cannot be generalised to the entire hospitality industry. Future research could use samples from private firms to test the study the corporate cash holdings strategies and its impact on firm performance, which will help improve the generalizability of this study.

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LIST OF PUBLICATIONS AND PAPERS PRESENTED

Journal Publication

Kwan, J., & Lau, W. (2011). A review of regulatory enforcement, corporate governance and market reactions. *African Journal of Business Management*, *5*(35), 13510–13516. http://doi.org/10.5897/AJBMX11.028

Submitted Journals

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Conference Proceedings

The International Borneo Business Conference (IBBC) 2014 (20th- 21st August 2014)

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Conference Presentation

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