

Corporate governance, excess-cash and firm value: Evidence from ASEAN-5¹

*Tahir Akhtar*²

Abstract: This study investigates the role of the country- and firm-level governance practices on the relationship between excess-cash and firm value in ASEAN-5 markets. Using the Generalized Method of Moment models and a sample of 578 firms from 2010 to 2020 the study finds that excess-cash reduces firm value, indicating high agency costs and low firm value. However, excess-cash motivated by managerial ownership, founder CEO, board independence, shareholder rights and creditor rights increase firm value while excess-cash due to managerial entrenchment and CEO duality reduce firm value. In the sub-sample analyses the study finds that entrenched managers and board size play a less effective role in wasting excess-cash in low-excess-cash firms while independent directors play a higher monitoring role in high-excess-cash firms. In addition, governance at the country-level is more effective than at the firm-level in improving the value of excess-cash in large firms. The study offers unique evidence on the relationship between excess-cash and firm value by integrating corporate governance practices at the firm- and country-levels. The research aids practitioners, academics, policymakers and investors in developing the best liquidity policies to enhance business performance.

Keywords: excess-cash, corporate governance, firm value, ASEAN.

JEL codes: N6, O16, C1, C3.

Introduction

The difference in countries' financial and governance structures affects the choices of firms' cash holdings (CH) (Da Cruz, Kimura, H., & Sobreiro, 2019). Financial markets in developing countries have less monitoring to reduce agency costs due to high CH compared to developed countries. The socio-economic characteristics of legal and economic actors are also weak in developing fi-

¹ Article received 18 July 2022, accepted 16 September 2022.

² Department of Economics and Finance, College of Business Administration, University of Ha'il, Saudi Arabia, tahirakhtar01@gmail.com, t.akhtar@uoh.edu.sa, <https://orcid.org/0000-0003-2067-4021>.

financial markets, increasing the impossibility of transactions (North, 2005) and promoting numerous non-productive activities, including the misuse of corporate excess-cash. Thus, firms in developing countries do not participate in the use of liquid assets as effectively as in advanced countries to create value for investors. Therefore, the potential for private extraction from liquid assets in developing markets is higher and riskier (Acemoglu, Johnson, Robinson, & Thaicharoen, 2003; Akhtar, Tareq, Sakti, & Khan, 2018). Despite the much-anticipated agency costs in developing countries only a handful of researchers have turned their attention investigating CH in these markets.

The agency theory suggests that internal resources can be misused and waste corporate wealth (Jensen, 1986). As a result increased liquidity may lead to more agency disputes; however strict control of managers through effective governance mechanisms could reduce such disputes. Kahan and Rock (2003) argued that corporate governance (CG) aims to secure the interests and rights of shareholders and mitigate the agency problem of excess-cash by optimizing the cash levels or disciplining managers to invest for the benefit of shareholders. As a result the CG mechanism can be quite useful in monitoring management operations especially in firms that operate in developing markets (Alatassi & Letza, 2018).

CG includes both country-level (legal/regulatory system and the corporate control market) and the firm-level (share ownership and board of directors (BOD) structure) governance practices. A better combination of governance practices can improve the value of the firm (FV). Yu, Sopranzetti and Lee (2015), Al-Najjar and Clark (2017), Caprio, Giudice and Signori (2019), and Akhtar, Tareq and Rashid (2021a) have revealed that corporate governance mechanisms (firm-level) reduce cash asset expropriations by the manager and therefore preserve the FV. Country-level governance practices in initiating CH and influencing firms' performance are discussed in cross-sectional studies (see Iskandar-Datta & Jia, 2014; Yung & Nafar, 2014; Seifert & Gonenc, 2016; Kusnadi, 2019; Akhtar, Tareq & Rashid, 2021b).

The existing studies examined the relationship between CG and CH. Yet these studies still lack attention to examining the impact of firm-level and country-level governance (collectively) on the association between excess-cash holdings and FV specifically in developing financial markets. The current study aims to investigate the discussed phenomenon in the developing financial markets and chooses ASEAN-5 markets for this purpose due to several reasons.³ First, the financial structure and the institutional and legal arrangements of the markets are similar and provide a fertile ground for testing our hypotheses. Second, Lim (2011) argued that ASEAN's participation in the global investment strategy is important as it is one of the four largest trading regions in the world attract-

³ Due to lack of country-level governance indicators the study includes five ASEAN markets namely, Malaysia, Indonesia, Singapore, Philippine, and Thailand.

ing investors from all over the world. Third, there is a phenomenal improvement in ASEAN's market capitalization which helps bring these markets to the forefront (Mei-Se, Chien-Chiang, Te-Chung, & Hui-Ting, 2015). These developments have increased the interest of academics and practitioners in these markets. In addition firms in the Asian region prefer liquidity rather than more risky debts (Lee & Lee, 2009) and only a handful of studies have considered ASEAN markets concerning CH.⁴ Thus, the study of ASEAN markets makes a valuable contribution to the existing literature.

The current study contributes to the literature in several ways. First, the study considers management ownership (BOD- and managerial ownership), board effectiveness (the board size and the number of independent directors) and Chief Executive Officer (CEO) monitoring (CEODuality leadership, CEO who also heads the BOD and founding CEOs) as firm-level monitors and shareholders-rights (SHR) and the creditors-rights (CR) as country-level monitors. These CG instruments have been well discussed in the literature; however this study is the first attempt to contribute to the literature by creating a multi-factor model incorporating both country- and firm-level CG methods and investigating their effects on the association between excess-cash holdings and FV in ASEAN-5 (developing financial market). Second, existing studies do not take into account popular theories such as agency (entrenchment) and the interest alignment hypothesis to construct hypotheses in the manufacturing industry nor did the results confirm this by conducting robustness tests to make sound liquidity policy recommendations to improve FV. This study develops the hypotheses related to excess-cash holdings based on the agency and interest alignment hypothesis and verifies them based on sub-sample analyses.

Using 578 firms listed on ASEAN-5 stock markets from 2010 to 2020 the study finds that excess-cash has a negative effect on FV. However, this negative relationship is offset by a strong CG mechanism. Excess-cash due to managerial ownership (MGOwn), a higher independent directors proportion and founder CEOs improve FV. These results indicate that shareholders in companies with a high cash surplus are less concerned with internal management because of wasteful projects especially when there is better governance. Therefore, in firms with a strong CG managers' interests are aligned with shareholders because

⁴ In the Association of Southeast Asian Nations (ASEAN) context Lee and Lee (2009) have used firm-level governance attributes to check their impact on CH for firms listed on ASEAN-5, during 2001–2005. Kusnadi (2011) has used the data of Singaporean and Malaysian firms. They used the duality of the CEO, the board of directors' independence, the size of the board and the ownership structure in their study. Wasiuzzaman (2014) has investigated CH's financial determinants for listed firms in Bursa Malaysia. Kusnadi (2003) and Kusnadi (2019) studied Singaporean firms to examine the impact of ownership of non-managerial block-holder on CH and the impact of political influences on the CH value respectively. E-Vahdati, Zulkifli and Zakaria (2018) have considered ASEAN markets to investigate the effect of board diversification on corporate performance.

strict supervision over managers makes them more disciplined in investing in the firm's improvement. However, the study finds that FV declines in firms with more excess-cash and large board sizes as well as a high management ownership level (a proxy for managerial entrenchment (managerial ownership square)). In other words, if firms have more excess-cash shareholders discount FV when implementing weak barriers to control the excessive use of cash through the CG structure. When firms are sorted based on their degree of cash level (low vs high), the study finds that the effects of managerial entrenchment and board size are more effective in firms with high excess-cash levels. When firms are classified by total assets (small, medium, and large) the results indicate that excess-cash is insignificant in affecting FV in medium firms while there is a less effective role of excess-cash on FV in large firms due to the firm-level governance.

In the rest of the study Section 2 describes the literature review and the development of hypotheses. The methodology is described in Section 3. Section 4 provides results. Section 5 concludes with the policy implications of the findings.

1. Hypotheses development

Over the past few years there has been a striking increase in the firm's CH. Businesses keep cash on hand to save transaction costs and prevent under-investment losses owing to future funding shortages (Kim, Kitsabunnarat-Chatjuthamard, & Nofsinger, 1998; Opler, Pinkowitz, Stulz, & Williamson, 1999; Wayne & Partch, 2003; Ozkan & Ozkan, 2004). Holding cash enables businesses to invest in successful net present value (NPV) projects and eliminate the need for expensive external funding (Yung & Nafar, 2014). Cash is an investment with a lower rate of return, however (Dittmar, Mahrt-Smith, & Servaes, 2003; Tong, 2010), and businesses with ingrained managers are more likely to hold large amounts of cash rather than paying dividends to shareholders. Large CH may also result in the agency problem of free cash flows if management oversight is insufficient (Dittmar et al., 2003; Jensen, 1986). One of the main predictions of agency theory is that while robust and effective mechanisms of monitoring can prevent managers from wasting corporate resources the availability of firm resources may lead to a discounting of FV. According to Jensen, a cash reserve is the type of asset that poses the greatest threat to the company's value (1986). This demonstrates that having a lot of cash costs money but effective CG can offset those costs (Dittmar et al., 2003).

By maximizing cash levels or by instilling discipline in managers CG aims to reduce the agency problem associated with free cash flows and encourages them to make investments that will benefit shareholders. In this vein researchers looked into the connections between business value, CH, and governance processes at both the firm- and the country-levels. On the managers' worries about the size of the cash reserves and the impact of CG in lowering the agen-

cy cost of large CH, they have discovered conflicting findings. Cross-sectional studies on a macro level such as those by Dittmar and others (2003), Kalcheva and Lins (2007), Iskandar-Datta and Jia (2014), Seifert and Gonenc (2016) and Akhtar and others (2021b) discussed an investigation of the financial factors specific to the country that lead to CH. The majority of cross-sectional studies have shown that investors place less value on CH when managers are unchecked by investors or when country-level investor protection is insufficient. See Chen (2008), Chen and Chuang (2009), Bokpin, Isshaq, Aboagye and Otchere (2011), Boubaker and Nguyen (2015), Podolski, Truong and Veeraraghavan (2016) and Akhtar and others (2021a) discussions on the impact that firm-level governance has on CH. These studies show that firm-level governance measures can successfully prevent managers from misallocating cash assets which helps increase firm value.

In empirical studies it has been examined how CG affects CH to increase FV when investors are concerned about the agency problem as was previously discussed. The current research however gave little thought to how surplus cash and business value, as well as country- and firm-level governance relate to one another. As a result both the firm-level governance practices and the country-level governance practices are produced as the sub-hypotheses for the subsequent hypotheses.

H_A: The governance practices at the firm-level reduce the agency problem of excess-cash for the firms to improve value.

H_B: The governance practices at the country-level reduce the agency problem of excess-cash for the firms to improve value.

1.1. Firm-level governance practices

BODOwnership (BODOwn): Agents are the BOD or other executives in the firms. The current study has considered both BOD- and managerial-ownership. Because BODs can get a wide range of information related to a corporation's strategic management it is easy to authenticate the correctness of the information disclosed to the shareholders and monitor decisions. BODs control top management to protect the shareholders' interests (John & Senbet, 1998) and can effectively monitor the performance of a firm by disciplining the management and CEO of the firm (Hermalin & Weisbach, 1991). By exercising their responsibilities BODs create value for their shareholders. The BOD can be motivated to fulfil their responsibilities by giving them share ownership of the firms.

A high percentage of board ownership indicates high oversight by BODs (Yu et al., 2015) and that oversight tends to increase FV by reducing agency problems. Two different schools of thought explain BODOwn monitoring. The first view states that higher internal oversight by the BODs will force managers to withdraw excessive cash which is in line with the assumption of interest alignment hypothesis. Thus, limiting the access to internal cash reserves which reduces

the agency problems and increases FV. On the other hand, BODown leads to more monitoring of the board so that BODs have less fear that their managers will not misuse the higher cash reserves. Due to the strong oversight of BOD there is a better interest alignment between BODown and CH. The managers will use the excess cash reserves in the shareholders' best interest and as a result the FV increases. Therefore, this study can state the first hypothesis as follows:

H_{A1} : Excess-cash generated by BODown increases FV.

Managerial-Ownership (MGOwn): The principle-agent conflicts of interest are less likely when managers hold more shares in a firm (Chen, 2008). Al-Dhamari and Ismail (2014) documented the role of MGOwn in minimizing agency problems of free-cash-flow. Their results showed that increasing MGOwn increases the revenue estimates. Lee and Lee (2009) reported the positive impact of the excess-cash generated by MGOwn on FV. Yu and others (2015) argued that managers could hoard excess-cash at lower levels of MGOwn because there is less worry that managers will misuse the firm's cash holdings, which results in higher FV. As in developing financial markets firms are often forced to seek external financing and should be able to finance their operations using cash in hand. In this way MGOwn helps to reduce agency conflicts and maximize FV. Hence the study predicts that:

H_{A2} : Excess-cash generated by MGOwn increases FV.

Managerial Ownership Square (MGOwnSQ): The higher liquidity of assets gives owners the advantage of controlling managers but at the same time more liquidity gives managers the power to turn assets in their favour (Myers & Rajan, 1998). Earlier studies suggested that a lower managerial share ownership (MGOwn) level suggests better alignment of interest between managers and shareholders but the ongoing increase in managerial share ownership (MGOwnSQ) will increase management control on liquid assets and thus the entrenchment influence of managers' increase (Morck, Shleifer, & Vishny, 1988; McConnell & Servaes, 1990). Managers' superior control rights encourage them to use their personal interests at the expense of stockholders (Opler et al., 1999; Boubaker & Nguyen, 2015). Therefore, managers seek to benefit themselves rather than shareholders.

Yu and others (2015) found that when management assets (MGOwnSQ) reach a certain level shareholders do not allow managers to accumulate additional cash. Because the higher managerial share ownership level leads to diverting managers' interests from those of shareholders which may negatively affect FV. For this reason shareholders make managers spend extra cash to minimize its use in wasteful projects. Thus, the study expects a concave relationship that has diminishing rates of return. Thus, the third hypothesis is:

H_{A3} : Excess-cash generated by the entrenched managers (MGOwnSQ) hurts FV.

CEODuality: CEODuality occurs when a person serves both as chairman of the board and CEO. CEODuality is detrimental to the firms because such a person is monitoring their actions. Underperforming CEOs who are pursuing their interest in share price cannot be removed by the board which will result in poor performance (White & Ingrassia, 1992). Thus, firms with dual CEOs are more likely to have agency disputes (Chen, Guedhami, Yang, & Zaynutdinova, 2020). Boubaker and Nguyen (2015) and Chen and others (2020) argued that the splitting role of chairman and CEO is important in reducing agency conflicts. They have further argued that the dual leadership role is thus less effective in controlling managerial entrenched behaviour over the firm's resources. Therefore, the potential implication is that by uniting the chair and CEO roles dual CEOs encourage managers to maintain a substantial amount of wasteful capital for their well-being instead of that of the shareholders indicating higher agency costs and lower FV. Thus, the study postulates that:

H_{A4}: Excess-cash motivated by CEODuality reduces FV.

Founder CEO: Founders exert greater influence on business operations and a firm's decision-making. When firms' founders act as CEOs their influence in firm decision-making increases. Bahrami and Evans (1987) argued that founding CEOs focus on the long-term benefits of a firm rather than on their own interests thus reducing agency disputes and indicating higher FV. Founder CEOs improve firm performance by overseeing the firm effectively (Chen & Chuang, 2009). They tend to be more influential in business operations and firm decision-making, thus reducing agency problems between principal and agent. He (2008) found higher financial performance for firms with founder CEOs. They argued that the founder CEO's interest in the firm was due to a strong organizational commitment. Lee and Lee (2009) found that excess-cash generated by strong firm-level governance positively affects FV. Thus, a high founder CEO ratio suggests strong governance monitoring related to the interest-aligned hypothesis. Hence the study hypothesizes that:

H_{A5}: Excess-cash generated by founder CEO improves FV.

Board Size: John and Senbet (1998) argued that a large board size leads to weak performance in decision-making due to poor communication and the time-consuming performance of directors. As a result strict monitoring of managers is reduced and managers can hold a large sum of cash for their own welfare (Al-Dhamari & Ismail, 2014). Free-riding problems, slower decision-making and coordination problems are the main reasons for such losses (Boubaker & Nguyen, 2015). The organizational inadequacies are considered higher than the wider pool of expertise (Saha & Kabra, 2019). Due to the large size of the board most board members do not cooperate in the improvement of the firm resulting in the problem of free riding. The large size of the board would lead to inefficient and sluggish decision-making due to the overcrowding of the board

thus reducing the tight hold on managers which enables them to store a large sum of cash (Lee & Lee, 2009; Al-Dhamari & Ismail, 2014). The poor conduct of managers allows them to use cash for their rights at the shareholders' expense which results in higher CH agency costs thus reducing FVs (Lee & Lee, 2009; Al-Dhamari & Ismail, 2014). Hence the study predicts that:

H_{A6}: Excess-cash generated by board size hurts FV.

Independent Directors: An independent board reduces managerial dominance by overseeing opportunistic managers and the board's effectiveness plays a role in directing corporate actions (Chahine & Filatotchev, 2008). Independent directors protect and strengthen the protection of minority stockholders who have little control over the firm (Kim et al., 2007). As a result independent directors are most successful in situations that are at higher expropriation risks by outside shareholders (Dahya, Dimitrov, & McConnell, 2008). In this regard board independence and the excess-cash motivated by an independent board can affect FV in two ways. The first is that of enhancing the degree of information disclosure to investors and reducing information asymmetry (Chahine & Filatotchev, 2008). Independent directors help firms in reducing managerial expropriation and entrenchment of firm resources thus improving FV (Lee & Lee, 2009). The second relates to the firm's strong oversight by an independent board that minimizes managers' personal gains at shareholder cost. In this way board independence provides stronger protection for investors, reduces agency costs associated with higher CHs and improves FVs (Opler et al., 1999). Therefore, the study predicts that:

H_{A7}: Excess-cash generated by the independent board positively affects FV.

1.2. Country-level governance practices

Shareholder Rights (SHR): Shareholder rights include voting power and participation in employee compensation regarding a firm's financial decisions which helps reduce the agency problem of high CH (World Bank, 2003; Dallas, 2004). These rights help shareholders to obtain information on financial matters from the firm's officials such as BODs, analysts and employees which helps reduce information discrepancies between managers and shareholders and as a result FV increases (Asian Development Bank, 1997). Dittmar and others (2003) argued that shareholders set limits on cash at the manager's discretion when managers have sufficient power to manipulate resources. They further argued that firms operating under weak SHR could not force insiders to withdraw excessive cash balances especially when it was easy to obtain external funds. In this case large cash reserves indicate low investment and high agency costs. Pinkowitz, Stulz and Williamson (2006) found that firms with bad shareholder protection had lower cash values for minority shareholders. Kalcheva and Lins (2007) argued that weak external shareholder protection decreases FV if the firm holds higher

cash levels. Harford, Mansi and Maxwell (2008) reported that higher acquisitions and capital expenditures occur when there is both a weak SHR and excess-cash and that combination results in decreased profitability and lowered FV. Iskandar-Datta and Jia (2014) provided evidence in support of the prediction of managerial empire-building and the agency cost explanation that the managers spend excess-cash on value-destroying projects under weak investor protection. Since the majority of the firms in this sample are from countries with insufficient shareholder protection the agency hypothesis predicts that:

H_{B1}: Excess-cash generated by weak shareholder rights reduces FV.

Creditor Rights (CR): The laws of countries that protect creditors in the event of non-payment are known as creditor rights (Kyröläinen, Tan, & Karjalainen, 2013). Yung and Nafar (2014) argued that firms could take legal action in countries with high CRs ranging from managing managers to restructuring and taking control of a firm's assets. However, these moves are not beneficial for FV because, under strong CR, managers cannot invest in high-risk projects which increases the cash levels indicating that the FV could be hurt (Chava & Roberts, 2008; Nini, Smith, & Sufi, 2009). Credit covenant breaches increase CEO turnover (Ozelge & Saunders, 2012). This destabilizes the firm's internal hierarchy allowing entrenched managers to maximize their cash which in turn hurts FV. The strong CR imposes private charges on managers in the event of a firm's insolvency which increases the turnover of the managers (Acharya, Amihud, & Litov, 2011). The principal-agent conflicts literature argued that managers might use corporate assets for their private interests due to fear (Bebchuk and Weisbach, 2010). Thus, when managerial private extractions are higher, excess-cash decreases FV (Pinkowitz et al., 2006; Kalcheva & Lins, 2007). Yung and Nafar (2014) have supported these arguments and found that excess-cash encouraged by CR adversely affects FV. Since the sample firms used here are from countries with strong CR the study expects that strong CR will encourage managers to hold cash to minimize the default risk. Thus, the agency hypothesis predicts that:

H_{B2}: Excess-cash encouraged by strong creditors' rights hurts FV.

2. Sample and methodology

2.1. Sample and data collection

The study targeted manufacturing firms listed on ASEAN stock markets during 2010–2020 to test the hypotheses empirically. The current study focuses on the manufacturing sector which requires firms to have more cash reserves than any other sector. Nason and Patel (2016) argued that manufacturing firms have less influence over government regulations than utility and service firm, which could

change the firms' strategies and are more likely to invest in tangible assets than financial institutions which can manage cash through investments and loans. Liquid assets are more likely to be exploited in these firms (Chen, 2008). Thus, a study of the manufacturing sector provides a better platform for this study.

Initially all manufacturing firms from ten ASEAN markets were targeted. However, due to a lack of data for the country-level governance variables the study is restricted to five ASEAN countries (Indonesia, Malaysia, Singapore, Philippines, and Thailand). Moreover, due to missing annual reports, lack of CG data and unavailability of annual reports in English the final sample was reduced to 578 firms making 6,358 firm-year observations.

The country-level governance data is compiled from the company law or country commercial code (also available in a study by La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998).⁵ The financial data used to calculate the dependent and control variables and the data on firm-level governance variables including MGOwn, BODOwn, CEODuality, founder CEO, board independence and board size were extracted from the annual reports. To minimize the impact of outliers financial data is winorized at the 1st and 99th percentiles.

2.2. Empirical model

Following previous studies (Lee & Lee, 2009; Dittmar & Mahrt-Smith, 2007) this study has defined excess-cash as the residual cash after firm operations. Excess-cash can be an indication of a manager's expropriations of firm assets that are needed for their day-to-day operations. Following earlier studies Equation 1 is used to compute the excess-cash level (Opler et al., 1999; Dittmar et al., 2003; Dittmar & Mahrt-Smith, 2007). The Generalized Method of Moment (GMM) method is applied to Equation 1 and year dummies are included to reduce the effects of macroeconomic and business cycle aspects. Then by calculating actual and estimated cash difference (i.e. residuals from Equation 1) the excess-cash is calculated:

$$CH = \chi + \chi_1 FS_{i,t} + \chi_2 CFTA_{i,t} + \chi_3 Vol.CFTA_{i,t} + \chi_4 NWC_{i,t} + \chi_5 CapExp_{i,t} + \chi_6 Div.Dummy_{i,t} + \chi_7 Lev_{i,t} + e_{i,t} + Year Dummies \quad (1)$$

In Equation 2 the interactions among excess-cash and governance variables are used to check their relationship with FV. To control the potential endogeneity issues *the* GMM method is used to check the relationship among the variables used in the study. Dittmar and others (2007) argued that finding

⁵ In the current sample the average SHRI value is 3.41 and the minimum and maximum are 2 and 4, respectively. Statistics show that sample firms have stronger rights on average. The average CRI value is 3.7 with a minimum value of 0 and a maximum value of 4. Although most firms in the sample are from developing economies the countries still have strong shareholder rights and creditor rights. This is because the firms in the sample are from the top ASEAN's economies.

an instrument for CG is always challenging and adding CG itself and the interactions between excess-cash and CG may eliminate endogeneity issues as excess-cash varies significantly over time than CG. However, the current study uses the estimation of the first difference GMM⁶ (Arellano & Bond, 1991) to deal with the possible endogeneity (Megginson, Barkat Ullah, & Wei, 2014). In GMM estimations the current study has treated lagged Tobin's Q and independent variables as endogenous and two times lagged is applied (Ozkan & Ozkan, 2004; Chen, 2008).

$$\begin{aligned}
 \text{Tobin's } Q = & \chi_0 + \chi_1 CH_{i,t} + \chi_2 BODOwn_{i,t} + \chi_3 MGOwn_{i,t} + \chi_4 MGOwnSQ_{i,t} + \\
 & + \chi_5 CEOduality_{i,t} + \chi_6 Founder CEO_{it} + \chi_7 BS_{i,t} + \chi_8 BI_{i,t} + \\
 & + \chi_9 SHRI_{i,t} + \chi_{10} CRI_{i,t} + \chi_{11} BODOwn * EXCash_{it} + \\
 & + \chi_{12} MGOwn * EXCash_{i,t} + \chi_{13} MGOwnSQ * EXCash_{i,t} + \\
 & + \chi_{14} CEOduality * EXCash_{i,t} + \chi_{15} FounderCEO * EXCash_{i,t} + \\
 & + \chi_{16} BS * EXCash_{i,t} + \chi_{17} BI * CH_{i,t} + \chi_{18} SHRI * EXCash_{i,t} + \\
 & + \chi_{19} CRI * EXCash_{i,t} + \chi_{20} FirmSize_{it} + \chi_{21} SalesGrowth_{i,t} + \\
 & + \chi_{22} Leverage_{i,t} + \chi_{23} NWC_{i,t} + e_{i,t} + Year Dummies \tag{2}
 \end{aligned}$$

For FV Tobin's Q is used a proxy. Ciftci, Tatoglu, Wood, Demirbagc and Zaim (2019) argued that the most reliable firm performance measure based on growth potential is Tobin's Q. Malkiel and Fama (1970) argued that Tobin's Q can capture the company's current assets and potential for future growth. Investors' expectations for future occurrences are also captured by Tobin's Q which also includes an assessment of existing business plans (Christensen, Kent, & Stewart, 2010; Demsetz & Villalonga, 2001; Ehikioya, 2009; Rodriguez-Fernandez, 2016).

The shareholder rights index (SHRI) index is the Anti-director right index developed by La Porta and others (1998) and updated by Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008) and the creditor rights index (CRI) index is developed by La Porta and others (1998) and updated by Djankov, McLeish and Shleifer (2007). The SHRI ranges from 0 to 5 in which the lower values represent that the company's charters and legal rules treat external shareholders unfairly. When each of the six conditions for rights granted to minority shareholders through the governance mechanism is met the index is increased by 1. The countries with SHRI values equal to 3, 4, or 5 have high shareholder rights groups and the countries with SHRI values equal to 0, 1, or 2 are in the low shareholder rights group. On the other hand CRI varies from 0 to 4, with 0 for weak creditor rights and 4 for strong creditor rights. For the present study SHRI values are available for the years 2003 to 2006, and CRI values are avail-

⁶ First difference GMM is used because the panel data used has a short time-dimension and a large firm-dimension.

able from 1996 to 2006. Seifert and Gonenc (2016) anticipated that the level of creditors and shareholders did not change over an extended span of time. They added that since the indicators show a little difference over time the integrity of the results is not compromised using the same value. This study followed a similar method in the investigation and took the same values of the indicator for the years after 2005. The definitions of the firm-level governance and control variables used in Equations 1 and 2 are provided in Table A1 in the Appendix.

2.3. Descriptive statistics

The values of Tobin's Q are almost similar for all countries except for the Philippines as depicted in Table 1. The highest mean cash to total assets (Cash/TA) value is 17.8% for Singapore followed by Malaysia (12.19%). Indonesia, the Philippines and Thailand all have similar percentages of 10.3%, 11.3%, and 9.8% respectively. Among the country-level governance, the values of SHRI are higher for Malaysia and Singapore while Thailand, the Philippines and Indonesia have lower values. For CRI, Malaysia and Singapore have higher values, whereas the Philippines has the smallest value.

Table 1. Mean values of financial and governance variables

Countries	Malaysia	Singapore	Thailand	Indonesia	Philippines
Dependent variable					
Tobin's Q	1.34	1.26	1.33	1.26	0.996
Moderating variable					
Cash/TA (%)	0.1219	0.178	0.098	0.103	0.113
Country-level governance (independent variables)					
SHR	5	5	4	4	4
CRI	3	3	2	2	1
Firm-level governance (independent variables)					
BODOwn (%)	8.22	7.89	8.21	2.18	3.95
MGOwn (%)	14.33	14.8	7.43	1.98	0.379
MGOwnSQ	500.37	560.06	230.24	81.85	1.04
CEODuality	0.26	0.473	0.31	0.295	0.57
Founder CEO	0.38	0.425	0.21	0.15	0.19
Board Size (BS)	7.301	6.62	10.23	4.43	10.15
Log (Board Size)	1.95	1.85	2.29	1.42	2.28
Board Independence (BI) (%)	0.43	0.44	0.38	0.37	0.28

Source: Own calculation using Stata 14.

The values of BODOwn are higher for Malaysia and Thailand at 8.22% and 8.21%, respectively representing a large percentage of share ownership for the board members. Singapore also has a higher mean value of BODOwn (7.89%). Indonesia and the Philippines have mean values of 2.18% and 3.95% representing a lower percentage of BODOwn. Managers in the Malaysian and Singaporean firms represent a huge percentage of shares while the Philippines has the lowest percentage of MGOwn (0.379%). For CEO Duality the average values for Malaysia, Thailand and Indonesia are 0.26, 0.31 and 0.295 representing a low dual CEO position in these firms. Singapore and Thailand on the other hand have a dual leadership structure for most firms as the values are higher for both countries, i.e., 0.473 and 0.57 respectively.

In Table 1 Singapore has the highest value for founder CEO (0.425) representing many founder CEOs followed by Malaysia having a value of 0.38. Indonesian firms have the least mean value of Founder CEO (0.15). Thailand represents a larger board size with an average value of 10.23. Indonesian firms have the least value for board size (4.43). This is because Indonesian firms follow a two-tier board system. Singaporean firms have the highest value (0.44) for independent directors while Philippines firms have the least (0.28).

3. Results

3.1. Overall results

Equation 2's findings are shown in columns 1 to 11 of Table 2. GMM estimations are run by using a single interaction term per estimation and the results are reported in columns 3 to 11 of Table 2. The study finds a positive and significant coefficient on the lagged Tobin's Q in the majority of the columns indicating that the FV is serially correlated. Thus, GMM estimates provide a purposeful examination of the effects of the governing mechanism on CH. Excess-cash significantly and negatively affects FV in columns 1, 2, 5, and 11. These findings are consistent with the free-cash-flow agency cost argument that managers waste the firm's excess resources on non-profit projects that decrease the FV (Jensen, 1986; Lee & Lee, 2009).

Individually BODOwn is positively related to FV in columns 2 and 3. However, the interaction term BODOwn*EXCash is insignificant in Column 3 implying that when there is good monitoring by the BOD the negative impact of the EXCash becomes ineffective which is consistent with the prediction of this paper H_{A1} . MGOwn is positively related to FV at the 1% significance level in Column 2. The result is in line with the interest alignment hypothesis which argues that inside ownership improves firm performance when the interest of management and shareholders are aligned by increasing the percentage of share ownership (Al-Dhamari & Ismail, 2014). In Column 4 the individual re-

relationship of EXcash as well as MGOwn with FV is insignificant while the interaction term MGOwn*EXCash is significantly positive. The results are consistent with the prediction of H_{A2} . In terms of economic significance the estimated coefficient of 0.039 in Column 4 for the interaction term suggests that an increase in MGOwn by 1% increases an additional dollar's contribution of excess-cash to the FV by \$0.039.

The estimated coefficient on MGOwnSQ (used for managerial entrenchment) has a significant and negative relationship with FV in columns 2 and 5 suggesting that the higher the managerial entrenchment the lower the FV. Verifying the statement of Morck and others (1988), the results indicate that higher managerial share ownership concentrates managerial voting rights resulting in higher personal welfare over the firm resources. Similar results are obtained for its interaction terms with excess cash as the interaction term MGOwnSQ*EXCash is significant and negative in Column 5. The results are consistent with the prediction of H_{A3} . The findings of this study support the argument of Lee and Lee (2009) and Akhtar and others (2021a) that a lower level of managerial ownership (MGOwn) represents well-intentioned behaviour of the managers; however the higher level of managerial ownership (MGOwnSQ) leads to the entrenched behaviour of managers. As a result and due to the presence of entrenched managers the investors discount the value of excess-cash when managers have high managerial share ownership.

The CEODuality has insignificant coefficient values both in columns 2 and 6 indicating the ineffective role of CEO having dual positions. However, the interaction term CEODuality*EXCash is significantly and negatively associated with the FV at the 1% significance level with the coefficient value of 0.684 in Column 6 implying that an increase in the CEODuality by one level decreases an additional dollar's contribution of excess-cash to FV by \$0.684 which is consistent with H_{A4} . This findings are in contrast with those of Lee and Lee (2009) but are consistent with the argument that the dual CEO's influence on the BOD's decisions results in expropriation by the insiders which is accompanied by higher agency expenses (Boubaker, 2007; Akhtar et al., 2021a). Thus, the entrenchment effect of CEODuality dominates the incentive alignment effects resulting in a lower FV.

The founder CEO is significantly and positively related to FV in columns 2 and 7. This is in line with Chen and Chuang's (2009) and Akhtar and others' (2021a) arguments which supported the interest alignment that larger founder CEO ratios in enterprises lead to lower agency costs and fewer options for mutualizing capital for expropriation-related reasons. EXCash is insignificant in in Column 7 however the interaction term Founder CEO*EXCash is significantly positive at the 1% level suggesting an increase in the FV is subject to the condition that the CEO should also be the founder of the firm. This is in line with the prediction of H_{A5} which suggests that the founder CEO focuses on the long-term development of the firms resulting in higher FV (Chen & Chuang, 2009).

Table 2. The association among CG, excess-cash holdings and FV

Columns	1	2	3	4	5	6	7	8	9	10	11
L1. Tobin's Q	0.294*** (0.120)	0.234*** (0.003)	0.047*** (-0.015)	0.036*** (-0.011)	0.092*** (-0.029)	0.030** (-0.015)	0.049*** (-0.015)	0.006 (-0.009)	0.051 (-0.060)	0.081 (-0.063)	0.084*** (-0.024)
EXCash	-1.322*** (0.009)	-0.989*** (0.038)	0.051 (-0.328)	-0.132 (-0.295)	-0.914* (0.508)	0.384 (-0.474)	-0.054 (-0.248)	-0.74 (-0.618)	-1.342 (-1.353)	-1.313 (-0.982)	-4.109*** (-0.54)
BODOwn		0.003*** (0.000)	0.002* (0.001)								
MGOwn		0.041*** (0.000)		0.001 (-0.001)							
MGOwnSQ		-0.072*** (0.000)			-0.008* (0.00)						
CEODuality		-0.064 (0.004)				0.019 (-0.013)					
Founder CEO		0.065*** (0.005)					0.037*** (0.012)				
Board Size (BS)		-0.069*** (0.007)						0.098* (-0.05)			
Board Independence (BI)		0.057*** (0.007)							0.245* (0.139)		

SHRI		0.031 (0.00)									0.002 (0.00)	
CRI		0.141 (0.00)									0.004 (0.00)	
BODOwn*EXCash			0.013 -(0.015)									
MGOwn*EXCash				0.039*** (0.008)								
MGOwnSQ *EXCash					-0.001** (0.00)							
CEODuality *EXCash												
Founder CEO*EXCash												
Board Size*EXCash										0.524*** (0.198)		
											0.214 -(0.363)	
Board Indepe- dence *EXCash												4.745* -(2.467)
SHRI*EXCash												0.427* (0.251)

The individual relationship of board size is significant and negative to FV in Column 2 while significant and positive to FV in Column 8. On the other hand the coefficient on the interaction term board size*EXCash is insignificant in Column 8 which is in contrast with Lee and Lee (2009) and the prediction of H_{A6} . The coefficients on independent directors are significantly and positively related to FV in columns 2 and 9 suggesting that shareholders assign a higher value to firms with a higher independent directors proportion. These results are consistent with Mehran (1995). The interaction term Board Independence*EXCash is significantly positive in Column 9 indicating that when the board's independence is high the cash level increases FV which is consistent with Lee and Lee (2009). Thus, the prediction here of H_{A7} is confirmed. In terms of economic significance evidence from Column 9 shows that the excess-cash increases FV by 28.2% ($1.342 : 4.745 = 0.282$) when there is one additional independent director. Overall the results show that firms with better board structures have higher FVs which is supported by earlier studies (Gompers, Metrick, & Ishii, 2003; Akhtar et al., 2021a).

Regarding the interactions between SHRI and excess-cash and CRI and excess-cash, the coefficients on SHRI are insignificant in columns 2 and 10; however the interaction term SHRI*EXCash is significantly and positively related to FV in Column 10 which is contrary to the prediction of H_{B1} and the findings of Kalcheva and Lins (2007) and Iskandar-Datta and Jia (2014). The estimated coefficient of 0.427 advocates that an increase in the SHRI by one level increases an additional dollar's contribution of excess-cash to FV by \$0.427. The coefficients on CRI are insignificant in columns 2 and 11 while the interaction term CRI*EXCash is significant and positive in Column 11 indicating that excess-cash motivated by creditors' rights increases FV which is in contrast with H_{B2} and Kalcheva and Lins (2007).

Keeping the number of groups higher or equivalent to the instruments is the basic rule in GMM. But due to the small number of markets the high number of instruments results in a weak "Sargan test" in some models as reported in the last second row of Table 2. The over-identification of Sargan/Hansen test results shows the instruments' validity as the models have higher p -values (columns 1 to 11) indicating that the study cannot reject instrumental variables' validity (IVs). However, tests related to the serial correlation show that the error term in various equations is not serially correlated in the models. The AR (2) test represents a high p -value (columns 1 to 11), indicating the lack of second-order serial correlation in the models.

3.2. Sub-sample results: Sorting firms by cash level and size (total assets)

Additional analyses are conducted by sorting firms based on their excess-cash levels (i.e., high and low excess-cash levels) and by total assets (small, medi-

um, and large sized firms). The majority of the results for different cash levels reported in Panel A and Panel B of Table 3 are quantitatively the same as those in Table 2 with the expected signs with few exceptions. The results based on GMM estimations show that the interaction terms $MGOwnSQ \cdot EXCash$ and $Board\ Size \cdot EXCash$ are insignificant in low excess-CH firms (Panel A). However, the excess-cash motivated by $MGOwnSQ$ (the interaction term $MGOwnSQ \cdot EXCash$) is negatively associated with the FV in high excess-CH firms (Panel B) with the coefficient value of 0.004 at a 1% significance level. Similar results are obtained when excess-cash is motivated by board size (the interaction term $Board\ Size \cdot EXCash$) (Panel B). This indicates that when firms have a lower level of excess-cash, there will be fewer agency issues because of less cash availability and vice versa.

The interaction term $Board\ Independence \cdot EXCash$ has an insignificant coefficient value in Panel A while a significant and positive coefficient value in Panel B. This indicates the positive role of independent directors in higher excess-cash firms. The results further show that the excess-cash motivated by $CEODuality$ is negatively related to FV while the excess-cash motivated by $MGOwn$, founder CEO and CR is positively related to FV both in Panel A and Panel B.

Overall the (GMM) results here and based on different cash levels indicate that the hypotheses H_{A2} , H_{A4} , H_{A5} , H_{B1} , and H_{B2} still hold for *low-cash level firms* while these hypotheses H_{A1} , H_{A3} , H_{A6} , and H_{A7} do not hold any longer. On the other hand the hypotheses H_{A2} , H_{A3} , H_{A4} , H_{A5} , H_{A7} , and H_{B2} still hold for *high-cash level firms* while the hypotheses H_{A1} , H_{A6} , and H_{B1} do not hold any longer. These results suggest the importance of dividing firms by the degree of their cash levels.

Table 3. The association among CG, excess-cash holdings and FV. Sorting firms based on excess-cash holdings

Independent variables	Panel A: Firms with lower excess-CH	Panel B: Firms with higher excess-CH
Tobin's Q (t-1)	-0.078*** (0.012)	0.089*** (0.013)
EXCash	-2.393*** (1.705)	-3.529*** (0.828)
MGOwn	0.010*** (0.003)	0.015*** (0.003)
MGOwnSQ	0.002** (0.005)	-0.00219*** (0.000)
CEODuality	-0.154*** (0.027)	0.026 -(0.029)
BODOwn	-0.002 -(0.001)	0.002** (0.001)

Founder CEO	0.095*** (0.037)	-0.060 -(0.038)
Board Size (BS)	-0.295*** (0.042)	0.025 -(0.036)
Board Independence (BI)	0.047 -(0.086)	0.039 -(0.060)
SHRI	0.240 (0.00)	0.001 0.00
CRI	0.223 (0.00)	0.021 0.00
BODOwn*EXCash	-0.016 -(0.022)	0.007 -(0.010)
MGOwn*EXCash	0.490*** (0.050)	0.022*** (0.008)
MGOwnSQ*EXCash	0.008 -(0.001)	-0.004*** (0.001)
CEODuality*EXCash	-3.427*** (0.451)	-0.573*** (0.205)
Founder CEO*EXCash	1.070*** (0.481)	0.345*** (0.180)
Board Size*EXCash	7.078 -(0.750)	-0.067** (0.277)
Board Independence*EXCash	-1.479 -(2.093)	1.082*** (0.372)
SHRI*EXCash	1.142*** (0.316)	-0.129 -(0.108)
CRI*EXCash	1.100*** (0.255)	0.854*** (0.117)
Control Variables	Yes	Yes
Sargan Test	0.101	0.153
Hansen Test	0.153	0.145
AR (2)	0.187	0.824

Note: The regression coefficient using GMM is reported in each cell with the standard error in brackets. The significance level is shown by an asterisk next to each coefficient value; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Sargan, Hansen, and AR(2) tests with higher values support the reliability of the tools employed, the precision of the models and the absence of second-order serial correlation in the models, respectively. Variables operationalization is provided in the Appendix (Table A1).

Source: Own calculation using Stata 14.

The study performed an additional test using GMM estimations by sorting the firms this time in terms of total assets (firm size) by classifying them into small, medium and large . These results are reported in Table 4. For both small and large firms excess-cash negatively affects the FV while it becomes insignificant for medium-sized firms. Al-Najjar (2015) argued that agency issues are severe in large firms however small firms have the market imperfections such as information asymmetry; as a result excess-cash decreases FV. On the other hand medium firms have higher chances of growth; thus these firms' trade-off costs and benefits of excess-cash. The majority of the individual and the interaction variables have shown significance with the predicted signs in small and medium-sized firms except for the coefficients on interaction terms SHRI* EXCash” and “CRI*EXCash for small firms and CEO monitoring (the interaction terms CEODuality*EXCash and Founder CEO*EXCash) for medium-sized firms which became insignificant. In contradiction to the prediction of this paper the interaction terms BODOwn*EX-Cash, MGOwn*EX-Cash, FounderCEO*EX-Cash, Board Size*EX-Cash and Board Independence*EX-Cash became insignificant for large firms indicating a less effective role of excess-cash under strong CG in large firms. The evidence for large firms is consistent with Abdullah (2004).

Table 4. The association between CG, excess-cash holdings and FV. Sorting firms based on size (total assets)

	Small	Medium	Large
Tobin's Q (t-1)	-0.010 (0.007)	-0.083*** (0.010)	0.075*** (0.014)
EXCash	-0.499*** (0.175)	0.294 (0.231)	-1.283*** (0.255)
BODOwn	-0.000 (0.001)	0.003* (0.001)	0.005*** (0.001)
MGOwn	0.006*** (0.002)	0.007*** (0.002)	0.012*** (0.002)
MGOwnSQ	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
CEODuality	0.126*** (0.014)	-0.015 (0.021)	0.016 (0.020)
Founder CEO	0.040 (0.037)	0.142*** (0.039)	0.040 (0.026)

Board Size (BS)	-0.116***	-0.027	-0.042*
	(0.022)	(0.041)	(0.023)
Board Independence (BI)	0.326***	-0.054	-0.034
	(0.040)	(0.046)	(0.029)
SHRI	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
CRI	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
BODOwn*EXCash	0.016***	0.012***	0.004
	(0.002)	(0.002)	(0.002)
MGOwn*EXCash	0.017***	0.015***	0.022
	(0.006)	(0.004)	(0.003)
MGOwnSQ*EXCash	-0.000***	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)
CEODuality*EXCash	-0.073*	0.014	-0.169*
	(0.043)	(0.057)	(0.048)
Founder CEO*EXCash	0.598***	0.001	-0.019
	(0.055)	(0.053)	(0.055)
Board Size*EXCash	-0.107*	-0.003	0.309
	(0.057)	(0.080)	(0.078)
Board Independence*EXCash	1.515***	0.705***	0.164
	(0.131)	(0.097)	(0.131)
SHRI*EXCash	-0.028	-0.064*	0.067**
	(0.027)	(0.039)	(0.026)
CRI*EXCash	-0.022	0.021	0.101***
	(0.021)	(0.024)	(0.035)
Number of Groups	377	320	325
Observations	1,706	1,592	2,183
F Statistics	1,219.451	32.365	23.393
Hansen test	0.260	0.950	0.401
AR (2)	0.459	0.536	0.190

Note: The regression coefficient using GMM is reported in each cell with the standard error in brackets. The significance level is shown by an asterisk next to each coefficient value; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Hansen and AR(2) tests with higher values support the reliability of the precision of the models and the absence of second-order serial correlation in the models respectively. Variables operationalization is provided in the Appendix (Table A1).

Source: Own calculation using Stata 14.

Overall, our results indicate that the hypotheses H_{A1} to H_{A7} still hold for *small firms*, while the hypotheses H_{B1} and H_{B2} do not hold any longer. The hypotheses H_{A1} , H_{A2} , H_{A3} , H_{7A} , and H_{B1} still hold for *medium firms*, while the hypotheses H_{A4} , H_{A5} , H_{A6} , and H_{B2} do not. The hypotheses H_{A3} , H_{A4} , H_{B1} , and H_{B2} still hold for *large firms*, while the remaining hypotheses do not hold. These results indicate that the role of excess-cash in affecting FV under different governance mechanisms is sensitive to dividing firms in terms of total assets.

Conclusions

This study has provided evidence regarding the impact of excess-cash due to country- and firm-level governance on FV in ASEAN-5. The study found a negative impact of excess-cash on FV. The conservative financing policy might be the reason for the negative relationship. Holding higher excess-cash than the optimal level encourages management to waste liquid resources in organizational inefficiencies. However, strong governance mechanisms discourage managers' entrenched behaviour by making the best use of corporate liquid resources. The study finds that organizational inefficiencies can be reduced by giving the share ownership to the inside management, enhancing the founder CEO's role and maximizing independent directors' proportion on the board. Consequently, the excess-cash due to these governance attributes improves FV. In contrast, excess-cash due to entrenched managers (proxy by MGOwnSQ) and larger board size negatively affect FV. This is the indication that these weak governance attributes are involved in organizational inefficiencies, thus reducing FV.

When firms are classified by their cash level, for the firms with low excess-cash holdings, the study finds a less effective role of excess-cash on FV due to entrenched managers. For high excess-cash firms, FV declines due to the availability of more liquid resources the entrenched managers get to misuse firm resources. Therefore, firms either should lower the level of excess-cash or should not allow managers to exceed a limited number of shares ownership. In high excess-cash firms, there is a higher role nominated to independent directors to monitor firms' excess liquid resources; as a result, excess-cash due to independent directors positively affects FV.

When firms are classified by their size, the study finds that the role of managerial and BOD ownership is higher in small and medium firms, but in large firms, the influence of these variables is lower, which may be due to the presence of a large number of shareholders in those firms. Therefore, the findings suggest that corporate policymakers in small and medium firms may provide a certain percentage of share ownership to the inside management to align managers' interests with shareholders in order to improve firm performance.

Founder CEOs play an effective role in small firms. As founders they are passionate about the long-term planning and expansion of firms which is why

they strive to make the best use of corporate resources resulting in increased FVs. However, due to the presence of a large number of other stakeholders in medium and large firms their role in these firms is less effective. Thus, in small firms shareholders should maximize the role of the founder CEO to increase firm performance. The role of independent directors is effective in all types of firms but the study has found a lack of evidence regarding the excess-cash motivated by board independence on FV in large firms. This may be due to the presence of few independent directors on the board or because of the management and executive directors' strong position on the board (Johari, Saleh, Jaafar, & Hassan, 2008). In general firms should employ more independent directors to maximize performance.

In large-size firms the study has found a lack of significant relationship between the excess-cash motivated by firm-level governance variables and FV. However, excess-cash due to country-level governance positively affects FV in large firms. This finding is interesting because the study has found a limited role of country-level governance in small and medium firms but in large firms country-level governance plays a dominant role. Thus, by improving the SHR and CR the monitoring in large firms can be improved to maximize the efficient use of cash and reduce agency costs. However, large firms need to improve their firm-level governance mechanism.

The study is limited to a few internal governance practices and only two external shareholder protection measures. Future researchers can add board diversity or employees compensation, etc., as internal and majority shareholders or institutional ownership, etc., as external governance provisions. Furthermore, the current study focus only on the manufacturing sector in ASEAN. Future studies can be extended by exploring the collective role of internal and external governance in private firms and firms from the financial sector in similar markets. Moreover, the future researcher can deepen the findings by comparing results in the developing markets having different institutional settings as external monitoring is organically connected to institutional characteristics of the financial markets regardless of whether they are developed or developing.

Appendix

Table A1. Data sources and definitions

Variables	Proxy	Calculation	Unit Measurement
Tobin's Q	Tobin's Q	(Book value of total assets - the book value of equity + the market value of equity) / the book value of the assets	Ratio (%)
Moderating variable. (Source: Annual Reports)			
Cash to Total Assets	Cash/TA	cash and cash equivalent / total assets	Ratio (%)
Independent variables. (Source: Annual Reports)			
BOD Ownership	BODOwn	Shares owned by the BOD to the total shares outstanding	Ratio (%)
Managerial Ownership	MGOwn	Share percentage owned by corporate executives	Ratio (%)
CEODuality	CEODuality	Setting value 1 if the CEO holds both chairman and CEO positions and 0 otherwise	Dummy variable 0 and 1
Founder CEO	Found-CEO	Assigned value 1 for founders and 0 otherwise	Dummy variable 0 and 1
Board Size	BS	The natural log of the BOD	Natural Log
Board Independence	BI	Independent directors to a total directors' ratio	Ratio (%)
Control Variables. (Source: Annual Reports)			
Firm Size	FS	Log (book value of total assets)	Natural Log
Cash-Flow	CFTA	EBITDA—(interest+ taxes + dividends) / total assets	Ratio (%)
Cash-Flow Volatility	CF-Vol	The standard deviation (cashflow / total assets)	SD of CFTA
Dividends Dummy	Divi-Dummy	Assigned 1 to the firm paying a dividend in that particular year and 0 otherwise	Dummy variable 0 and 1
Net Working Capital	NWC	(Current assets net of CH-current liabilities) / total assets	Ratio (%)
Leverage	Lev	Total debt / total assets	Ratio (%)
Research and Development	R & D	Research and development expenses/sales	Ratio (%)
Capital Expenditures	Cap-Exp	Capital expenditure / total assets	Ratio (%)
Sales growth	Sales growth	The current period sales / previous period sales	Ratio (%)

Source: Own elaboration.

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