Corporate governance and financial performance of firms listed on Asian Pacific stocks: evidence from Malaysia, Thailand, and Singapore

Ibrahim Khalifa Elmghaamez*

Coventry Business School,
Coventry University,
Gosford Street, Coventry, CV1 5DL, UK
and
Faculty of Economics and Political Sciences,
University of Tripoli, Libya
Email: ibrahim.elmghaamez@coventry.ac.uk
*Corresponding author

Xin Yao Gan

Coventry Business School,
Coventry University,
Gosford Street, Coventry, CV1 5DL, UK
Email: ganxinyg@uni.coventry.ac.uk

Abstract: This study examines the impact of corporate governance on the financial performance of Asia Pacific stocks in three Asian countries: Malaysia, Thailand and Singapore. By including a sample of 159 firms listed on three Asian stock markets from 2013 to 2017, this study found that the effects of corporate governance mechanisms vary significantly among the three Asian markets. Specifically, this study shows that board size has positively influenced listed firms' financial performance in the Singapore Exchange. However, our findings show that board size has negatively affected listed firms' financial performance in Thailand's Stock Exchange. In addition, our results reveal that board independence has negatively influenced listed firms' financial performance in Bursa Malaysia. Finally, this study provides implications for regulatory authorities in the Asian stock markets to separate between chairman and CEO roles since most Asian firms are owned and directed by business families.

Keywords: corporate governance mechanisms; financial performance; return on assets; Malaysia; Thailand; Singapore; Asian stock markets.

Reference to this paper should be made as follows: Elmghaamez, I.K. and Gan, X.Y. (2023) 'Corporate governance and financial performance of firms listed on Asian Pacific stocks: evidence from Malaysia, Thailand, and Singapore', *Int. J. Business Governance and Ethics*, Vol. 17, No. 2, pp.155–181.

Biographical notes: Ibrahim Khalifa Elmghaamez is a Lecturer in Accounting within the Economics, Finance and Accounting (EFA) Department at Coventry University, UK. He has also previously worked as an Assistant Lecturer in Accounting within the Faculty of Economics and Political Sciences at the

University of Tripoli in Libya over the period 2008–2012. He is also a member of the Academic Support Programme in Research Excellence (ASPIRE) at Coventry Business School, UK. He has published several articles in high-ranked ABS internationally leading journals, including *Thunderbird International Business Review*, *The International Journal of Auditing*, *Managerial Auditing Journal*, *International Journal of Disclosure and Governance* and *Journal of International Business Governance and Ethics*.

Xin Yao Gan received his Bachelors degree in Finance and Investment (honours) from Tunku Abdul Rahman University College in Kuala Lumpur. He was awarded the financial planning certificate (CFP) in 2018. He has been awarded an MSc in Finance with distinction from Coventry University (UK) in 2019.

1 Introduction

After the Asian financial crisis in 1997, corporate governance practices have gained much attention and become a severe issue for Asian countries and other emerging countries worldwide (Claessens and Fan, 2002). The Asian financial crisis has influenced many countries worldwide to exert more efforts to adopt good corporate governance practices and issue rigid regulations to protect investors' rights, thus attracting foreign investment and boosting long-term economic development growth (Cheung and Chan, 2004). Good corporate governance practices and board characteristics can significantly affect financial performance, such as board structure, composition, and size (Vafeas and Theodorou, 1998; Elmghaamez, 2021). However, very few Southeast Asia countries have issued corporate governance reforms after the Asian financial crisis in 1997 (Kawai, 2000; Cabalu, 2005).

Malaysia has experienced some improvement in corporate governance practices by establishing capital market masterplan to issue corporate governance reforms and enhance the regulations (Walker and Fox, 2002). In addition, the Kuala Lumpur Stock Exchange (KLSE) adopts the Malaysia Code of Corporate Governance (MCCG) to respond to the finance committee report recommendation after the Asian crisis. All Malaysian firms need to disclose financial information in their annual reports (Haron et al., 2005). Another significant progress for corporate governance reforms is the coordination and support given by professional bodies to update their codes of conduct to promote standards and awareness of corporate governance in Malaysia. The Malaysia code also recommends establishing remuneration, nomination committees, and independent directors (Shaikh, 2007).

Regarding corporate governance reforms in Singapore, the Council on Corporate Disclosures and Governance (CCDG) has been established by the Singaporean Government to issue accounting standards. The CCDG improves the quality of the existing financial reporting in Singapore by disclosing financial information and monitoring corporate governance practices (Yin-Sam, 2007). Singapore Stock Exchange (SGX) adopted the Code of Corporate Governance (CCDG) to maximise shareholders' values. It introduced the Singaporean Code in 2001 to encourage Singapore-listed firms to enhance shareholder values. Therefore, all listed companies in Singapore must comply with the Singapore code and explain any deviations (Tan, 2007).

In Thailand, the regulations and disclosure practices introduced by the government promoted corporate governance reforms. They involved three parties in establishing corporate governance reforms, including the Stock Exchange of Thailand (SET), the Securities Exchange Commission (SEC), and the Bank of Thailand (BOT). They have issued a code of best practices to enhance the performance of listed companies in Thailand. The code sets out principles to appoint independent directors and audit committees for firms listed on the Stock Exchange of Thailand (White, 2004). In addition, the regulation in Thailand requires listed firms to have a two-tier board system, which comprises the board of directors and executive board listed in the Stock Exchange of Thailand (Yammeesri and Herath, 2010; White, 2004; Seangarvut et al., 2020).

Despite the existence of corporate governance reforms in some Asian countries, the weaknesses of corporate governance in Asian countries are because of several factors, such as concentrated ownership structure, weak regulatory framework, a weak board of directors, excessive government intervention, and underdeveloped capital markets (Fan et al., 2011). The Asian listed firms exhibit a concentrated ownership structure by certain families, most common for small enterprises (Aguilera and Crespi-Cladera, 2016). According to the corporate governance scores evaluated by Credit Lyonnais Securities Asia (Watch, 2018), Singapore firms score highest among the three Asian countries, while Malaysia and Thailand firms are lower-rated. They rated Singapore as the top first country in Asia's corporate governance practices in 2016, but it dropped to third in 2018. In comparison, Malaysia's score has improved, which is ranked second in 2018. The downgraded scores might be due to corporate commitment to good governance practices that have not yet fully developed in Asian countries.

Previous studies have focused on investigating the relationship between corporate governance practices and the financial performance of firms listed on Asian stock exchanges (Iqbal et al., 2019; Al-ahdal et al., 2020; Leng, 2004). However, most prior empirical studies are solely concentrated on one country such as Malaysia (Leng, 2004; Bhatt and Bhatt, 2017; Yusoff and Alhaji, 2012; Leng and Mansor, 2005), Thailand (Detthamrong et al., 2017; Hodgson et al., 2011), or Singapore (Nguyen et al., 2014; Loh and Nguyen, 2018). To the best of our knowledge, no study has explicitly examined the impact of corporate governance mechanisms, namely the board size, board independence and CEO duality, and firm performance of firms listed on the three Asia Pacific stocks in Malaysia, Thailand and Singapore. This study also argues that there has been an increase in adopting good corporate governance practices by Asian firms in recent years to improve their financial performance. Therefore, this study attempts to overcome prior research limitations that have collected data about one country and those previous studies that collected outdated research data up to 2011. Therefore, this study seeks to determine whether the changes in the last five years can provide a new understanding of the relationship between corporate governance and listed firms' financial performance in Asian Stock Markets. Accordingly, the main research questions of this study are:

1 to what extent do corporate governance mechanisms influence the listed firms' financial performance in Asian stock markets

2 do corporate governance mechanisms have a similar or different impact on listed firms' performance in the three Southeast Asian countries: Singapore, Malaysia, and Thailand.

Corporate governance structure plays an essential role in disciplining management and determining firm performance, especially in stock markets with effective corporate control. Therefore, the board's characteristics significantly affect the shareholder's control (Hu and Izumida, 2008; Elmghaamez and Akintoye, 2021). Furthermore, several researchers found a dynamic relationship between corporate governance and corporate performance (e.g., Raheja, 2005; Harris and Raviv, 1988). Therefore, this research empirically determines the relationship between corporate governance mechanisms and corporate performance in three selected Southeast Asian countries: Singapore, Malaysia, and Thailand.

This study's findings contribute to the current corporate governance research by examining the relationship between board characteristics and firm performance in three Asian countries: Malaysia, Thailand and Singapore. Specifically, the empirical findings contribute to the general literature on the relationship between corporate governance and firm performance in these three Southeast Asian countries. This study is different from prior research because it used samples from three Southeast Asian countries for the most recent period from 2013 to 2017. Most previous studies have been conducted from 2000 to 2014 in different individual Asian countries using various independent variables and dependent variables such as return on equity (ROE), Tobin'Q ratio, and earnings per share (EPS). At the same time, there are limited studies conducted upon the three Southeast Asian countries jointly. Thus, this study examines corporate governance's impact on corporate financial performance in the three Asian countries for five years from 2013 to 2017. This study uses different years and variables compared to previous researches. Besides, the purpose of this study is to detect the possible changes that have taken place between two points of time and compare them to similar prior studies to see whether our results are consistent or different.

The rest of the paper is structured as follows. The following section presents the theoretical and empirical literature review and proposes some research hypotheses. The research methodology, research findings follow this section, and the discussion, while the final section outlines a brief conclusion, limitations, and suggestions for further research.

2 Literature review

This section discusses the theoretical and empirical literature related to corporate governance and firm performance and proposes some research hypotheses accordingly.

2.1 Theoretical framework

There is no one theoretical framework that can explain all variables included in this study. Therefore, our study has mainly relied on two fundamental theories to describe our study's theoretical framework. Specifically, this study has employed the theoretical frameworks suggested by agency theory and resource dependency theory to explain how corporate governance mechanisms have influenced firms' financial performance listed on Asian stock markets. Different scholars have recently discussed corporate governance and its connection using several theoretical frameworks, such as agency theory and resource dependency theory. Consistent with the previous study, this study employs agency theory to explain the impact of board characteristics on listed firms' financial performance in the Asian stock market to satisfy shareholders' needs in the Asian stock

markets. Corporate governance indeed becomes a way of minimising agency costs since it separates control and ownership (De Andres et al., 2005). In this vein, agency theory has been considered a fundamental part of the economic theory (Alchian and Demsetz, 1972). Jensen and Meckling (1976) applied agency theory to explain the relationship between principals (shareholders) and agents (managers). They suggested that an agency relationship arises when a principal delegates the decision-making authority to an agent and acts on their behalf (Jensen and Meckling, 1976). The shareholders would expect agents to act in their best interest, maximising shareholder's wealth. However, the agency theory assumes both contract parties are self-interested, which causes the agents to have opportunist behaviour and fall short of the principal's expectations (Bosse and Phillips, 2016). Thus, an additional agency cost might incur to solve the conflict between them. The agency cost refers to controlling and measuring the managers' behaviours (Jensen and Meckling, 1976).

A company's directors may be individualistic and only focus on self-fulfilment, which would fail to maximise shareholders' value. In contrast, effective monitoring can be achieved by having independent outside directors, which resolves the agency theory's primary concern. Some relevant studies support agency theory related to shareholders' monitoring functions (Weisbach, 1988). The independent directors are most likely to act in the best interest of shareholders and safeguard the owners' claims against the managers, who are self-interested in their benefits (Williamson, 1990). Moreover, agency theory's theoretical framework is widely employed to explain corporate governance studies (Eisenhardt, 1989; Adams et al., 2010). However, Young et al. (2008) argued that agency theory could not solely explain corporate governance practices in all analytical contexts because of the cross-national differences in institutional characteristics (Young et al., 2001). Therefore, this study employs the resource dependency theory as a supplementary theory to explain the association between corporate governance mechanisms and the firm performance of Asian listed firms. Eisenhardt (1989) contends that family firms do not have agency costs problems, and corporate governance would not affect the corporate financial performance since the management consists of family members.

From the resource dependency theory perspective, the directors play a critical role in providing the essential resources to their companies through their connection with the external environment (Hillman et al., 2009). Firms have a different dependence on the external environment to secure the resources for operation. The company directors can bring essential resources, such as skills, knowledge, and legitimacy (Hillman et al., 2000). According to Daily et al. (2003), acquiring vital resources by directors could improve company performance. However, this theory has been applied by very few studies to explain the relationship between board characteristics and firm performance (Pugliese et al., 2014; Zona et al., 2018). Hillman and Dalziel (2003) stated that the board comprises four categories: insiders, business experts, support specialists, and community influential. According to a study done by Alabdullah et al. (2018), board size was linked to firm performance and concluded that a larger board size would provide better access to various financial resources, leading to improved corporate financial performance.

2.2 Empirical literature review

Prior studies have examined the relationship between corporate governance mechanisms and firms' financial performance in Asian stock markets. Nevertheless, they have merely focused on investigating the impact of different governance practices on firm performance using a sample from an individual Asian country, Malaysia, Thailand, or Singapore, and they found mixed results. This study, therefore, seeks to perform a comparative analysis between the three Asian countries using a sample of Asian listed firms over the period from 2013 to 2017. Specifically, this study examines the impact of three internal corporate governance mechanisms (board size, board independence, and CEO duality) on the financial performance of firms listed on the three Asia Pacific stock markets: Malaysia, Thailand and Singapore.

Regarding the research conducted about Malaysian firms, the association between corporate governance and the financial performance of Malaysian firms has been examined by several scholars (e.g., Chua et al., 2018; Bhatt and Bhatt, 2017; Yusoff and Alhaji, 2012; Ibrahim and Samad, 2011; Lee-Kuen et al., 2017; Khan et al., 2017; Ghazali, 2010). And they found mixed findings. For example, Chua et al. (2018) found a positive and significant association between corporate governance mechanisms (board independence and board remuneration) and Malaysian firm performance. Likewise, by collecting data from 2007 to 2012, Bhatt and Bhatt (2017) study the effect of the Malaysian Corporate Governance Code on Malaysia's listed companies' performance. The study found a positive and significant relationship between corporate governance code and listed companies' performance in Malaysia. Using data from 2009 to 2011, Yusoff and Alhaji (2012) examine the relationship between corporate governance and firm performance for a sample of 813 companies listed on Bursa Malaysia. The study discovered the financial performance of Malaysian listed firms is positively influenced by the two corporate governance mechanisms: the number of independent directors and board size. Ibrahim and Samad (2011) examine the impact of corporate governance mechanisms on the firm performance of family and non-family public-listed firms in Malaysia from 1999 to 2005. The findings show that the board size and independent directors have a substantial significant influence on firm performance. Lee-Kuen et al. (2017) investigate the relationship between gender diversity and firms' financial performance listed on Bursa Malaysia spanning 2009–2013. The study suggests that the higher the number of females on the board, the better its financial performance. Using data from 2009 to 2013, Khan et al. (2017) examined the relationship between gender diversity and firms' financial performance using 100 non-financial companies in Malaysia. The study outlined that gender diversity has a positive impact on firm performance. However, Ghazali (2010) examined how corporate governance practices measured by board size and board independence in Malaysia affect corporate financial performance. The study shows that none of the corporate governance variables was statistically significant in explaining the corporate financial performance.

Concerning the empirical research done about Thailand, the relationship between corporate governance mechanisms and the financial performance of companies in Thailand has been investigated by some scholars (e.g., Buniamin et al., 2012; Yammeesri and Herath, 2010; Hsu and Petchsakulwong, 2010; Connelly et al., 2012; Prommin et al., 2016; Rachpradit et al., 2012), and found different results. For instance, Buniamin et al. (2012) examine the relationship between corporate governance and firm performance for a sample of 493 firms in Thailand over 2001–2014. The study reports that the audit

committee size has a significant negative impact on corporate performance. They also found that financial leverage mediates the relationship between audit committee size and large firms' financial performance in Thailand. In contrast, using a sample of 245 non-financial listed companies in Thailand, Yammeesri and Herath (2010) examine the effect of board structure on firms listed on the Thailand stock market. The findings show an insignificant association between independent directors and the financial performance of listed companies. Hsu and Petchsakulwong (2010) studied the relationship between corporate governance and firm performance of insurance companies in Thailand over 2000–2007. The results show that board independence has a positive impact on Thai insurance companies' performance. However, they found a significant negative association between firm performance and audit committee size, board tenure, board age, and board ownership. Connelly et al. (2012) investigate the association between corporate governance practices and firm performance for Thai firms. The study shows that corporate governance is positively associated with the financial performance of family firms in Thailand. However, they found that board size and board independence are not statistically related to firm performance. Prommin et al. (2016) examine the relationship between corporate governance and corporate performance in Thailand. The results suggest that corporate governance has an insignificant role in improving corporate performance in Thailand. Rachpradit et al. (2012) examine the relationship between CEO turnover and firm performance for listed non-financial companies in Thailand. The study indicates that CEO turnover is positively associated with corporate performance in the presence of CEO duality. At the same time, it is negatively related to Thai firms' performance in the company of board independence.

In terms of the research carried out about Singaporean firms, few studies have examined the association between corporate governance practices and corporate performance of companies in Singapore (Nguyen et al., 2014; Vu and Nguyen, 2017; Bhabra et al., 2003; Tuan and Tuan, 2016; Loh and Nguyen, 2018), and they report different results. For example, using a sample of 257 Singaporean non-financial listed companies, Nguyen et al. (2014) investigated the link between corporate governance and firm performance. The findings show that there is a positive and significant association between firm performance and board diversity. Meanwhile, firms with smaller board sizes tend to have better financial performance. Using 137 listed Singaporean firms over 2013–2016, Vu and Nguyen (2017) investigate the relationship between corporate governance and financial performance. The findings show that there is a negative association between board size and firm performance. However, they found insignificant relationships between board dependence, CEO duality and firms' financial performance of firms listed on the Singaporean stock market. Bhabra et al. (2003) examine the relationship between directors' equity ownership and firm performance in Singapore. The study found that directors' equity ownership has an insignificant impact on corporate financial performance. Tuan and Tuan (2016) studied the effect of corporate governance structures on publicly listed companies' financial performance in Singapore and Vietnam spanning 2008–2011. The findings show that board size and gender diversity have negatively influenced Singaporean listed companies' financial performance. However, the study found an insignificant relationship between the non-executive directors on the boards and Singaporean listed companies' financial performance. Loh and Nguyen (2018) examine the relationship between board gender diversity and financial

performance in Singapore. The study found an insignificant association between board gender diversity and corporate financial performance.

There is no guaranteed evidence to conclude a positive relationship between corporate governance and firm performance (Korac-Kakabadse et al., 2001). However, several recent studies found an inverse relationship between corporate governance practices and corporate financial performance in three Southeast Asian countries: Malaysia, Singapore, and Thailand (Mak and Kusnadi, 2005; Yammeesri and Herath, 2010; Zabri et al., 2016). For instance, Ramdani and Witteloostuijn (2010) concluded a negative effect between the board characteristics and firm performance in Asian nations, including Indonesia, Malaysia, South Korea and Thailand. However, their findings may report inconsistent results due to different methodologies and measurements for variables applied in those studies. Hence, it is essential to establish further study in this area. Therefore, this paper explores the relationship between firm performance and corporate governance indicators, namely the board size, board independence, and CEO duality.

2.2.1 Board size and firm performance

Board size refers to the total number of directors on board (Panasian et al., 2003). The board size plays an essential role in monitoring the managers (Anderson et al., 2004). Daily and Dalton (1993) concluded that board size is significantly associated with corporate performance in accounting-based and market-based measures. However, there are two different schools of thought and no consensus among scholars regarding how the board size influences firm performance (Delton et al., 1999). First, some scholars suggest a significant positive association between and corporate performance. This result indicates that board size can provide more monitoring resources, thus improving firm performance (e.g., Mintzberg and Mintzberg, 1983; Coles et al., 2008; Hermalin and Weisbach, 2001). This result aligns with the expectations suggested by resource dependency theory which assumes a positive effect between board size and firm performance (Delton et al., 1999). Based on resource dependency theory, there is a positive effect between board size and corporate performance since a larger board size would create more opportunities and access more resources. Hence, board size is a crucial factor influencing a board's efficacy by linking a firm and its external resources to boost performance (Pfeffer and Salancik, 1978).

In contrast, agency theory predicts an inverse relationship between board size and firm performance (Jensen, 1993). Klein (1998) claims that companies with a larger board size would require more practical advice for their management due to the diversity of skills and experience. Moreover, some scholars argue that companies with a smaller board size would perform better than large ones since they seek to improve their firm performance (Jensen, 1993; Yermack, 1996). This result indicates that a larger board size would complicate communication and slow the decision-making process (Hermalin and Weisbach, 2001; Lipton and Lorsch, 1992). In this regard, Jensen (1993) argues that a board of directors would only perform better when the board consists of a maximum of eight directors. Likewise, Florackis (2008) report that firms would have ineffective performance if more than seven or eight members were on board. Similarly, Bennedsen et al. (2008) stated that board size could negatively affect firm performance when it exceeds six members on board. However, Leblanc and Gillies (2005) suggested that companies can only perform better if they have eight to eleven directors on board.

Empirically, a study conducted by Abidin et al. (2009) found that a large board could perform better than a small board. Another research performed by Jackling and Johl (2009) found a positive relationship between board size and firm performance in India. However, Mak and Kusnadi (2005) found a negative relationship between board size and corporate performance by using a sample of Malaysian and Singaporean firms. Yammeesri and Herath (2010) used a selection of Thailand's firms, and they found an insignificant relationship between board size and corporate financial performance. Based on the findings above, this study proposes the first hypothesis as follows:

H_1 There is a significant positive relationship between board size and firm performance.

2.2.2 Board independence and firm performance

The definition of board independence refers to the percentage of the total number of independent non-executive directors to the total number of all directors within the board (Prabowo and Simpson, 2011). Independent directors are appointed by the shareholders and not by the company management (Stein and Plaza, 2011). Fama and Jensen (1983) suggest that an efficient board should have enough independent directors to monitor the managers' behaviour and perform their jobs in the shareholders' interests. Jensen and Meckling (1976) claim that the directors tend to pursue their interests in shareholders' interest because of the separation of ownership and control under an agency theory. Thus, having more independent directors on board can mitigate agency problems (Brickley and James, 1987). Moreover, the corporate governance codes in Malaysia, Singapore and Thailand also suggest that listed firms must include independent directors. Therefore, the board should consist of more than 50% of independent directors to supervise the management team effectively.

Using the sample of top 100 firms listed on the London Stock Exchange, Müller (2014) found a significant positive relationship between board independence and company profitability. Similarly, Schellenger et al. (1989) and Dehaene et al. (2001) found that boards with a higher proportion of independent directors are more associated with better firm performance. Ameer et al. (2010) also claim that a board with a higher percentage of outside directors positively affects firm performance in Malaysia. In contrast, using a sample of the UK's top FTSE 100 listed firms over 2013 to 2018, Elmghaamez and Akintoye (2021) examined the impact of internal corporate governance mechanisms on financial performance. The study found a significant negative association between board size and board independence and financial performance. Using a sample from Thailand, Yammeesri and Herath (2010) report that having many independent directors on board does not necessarily enhance company value. Another study found that a higher proportion of independent directors would not significantly improve firm performance (Jakpar et al., 2019). However, several studies report an insignificant relationship between board independence and corporate performance (Mallette and Fowler, 1992; Adams and Mehran, 2003). For example, Vafeas and Theodorou (1998) found a negligible association between non-executive directors and firm valuation. This result could happen because independent directors might not have relevant knowledge about their firms. This study, therefore, suggests the following research hypothesis:

H_2 There is a significant positive relationship between board independence and firm performance.

2.2.3 CEO duality and firm performance

CEO duality is a vital indicator of corporate governance practices since a CEO plays the chairman role (Finkelstein and D'aveni, 1994). This situation might happen because the chairman's role is to monitor the executive directors, including the CEO (Weir and Laing, 2001). Cadbury Report (1992) suggested an individual should not hold two CEO and chairman roles in the upper management. Heidrick & Struggles (2009) found that about 84% of EU firms have separated between the CEO and chairman roles. This result is supported by MCCG 2017 that suggested listed companies prevent integrating CEO and chairman roles.

According to agency theory, CEO and chairman roles should be separated and held by different individuals to reduce the potential conflicts among the board of directors (Fama and Jensen, 1983). Maseda et al. (2015) claim that the board would not perform well if involved in several roles simultaneously, including control management and protect shareholders' interests. If a person holds two different positions on board, abuse of power is more likely to happen since they would be compelling without any balance control over them. Thus, agency theory suggests that a firm with no CEO duality is more likely to perform better than a CEO duality since the managerial decisions are separated and reduce agency problems (Fama and Jensen, 1983).

Empirically, Haniffa and Hudaib (2006) found a significant negative effect between CEO duality and firm performance (ROA) within the East Asian context, implying that separating two roles would lead to better firm performance. Moreover, other studies found that CEO duality has a significant negative effect on US firm performance (Bhagat and Bolton, 2008). Likewise, Yammeesri and Herath (2010) reported that duality negatively influences firm value in Thailand. Similarly, Ramdani and Witteloostuijn (2010) concluded that CEO duality negatively associates with the corporate performance of companies in Indonesia, Malaysia, South Korea and Thailand. Despite all the findings above, some prior studies found an insignificant relationship between CEO duality and firm performance (Mustapa et al., 2015; Yusoff and Alhaji, 2012). Based on the findings in the literature, the hypothesis is proposed based on agency theory as follows:

H_3 There is a significant negative relationship between CEO duality and firm performance.

3 Research methodology

This section discusses the methodology used in this study including the following subsections sample size and selection, data sources and data analysis methods, variables definitions and measurements, and model specification.

3.1 Sample selection

The study sample was selected from three Southeast Asian stock markets: Bursa Malaysia, Stock Exchange of Thailand (SET), and Singapore Exchange (SGX). The three Southeast Asian markets are chosen to represent the sample for this study since they were among the top five Southeast Asia countries in terms of GDP in 2018, according to the International Monetary Fund (IMF) in April 2018 estimates. Malaysia, Singapore, and Thailand have the highest and similar GDP among Southeast Asia countries.

Additionally, according to the World Federation of Exchanges, stock exchanges in Southeast Asian countries are from Asia's top 10 stock exchanges, including Bursa Malaysia, the Singapore Exchange, and Thailand's Stock Exchange. Moreover, the primary cause of the Asian Financial Crisis during the 1990s was the collapse of the money bubble by many Southeast Asian countries, including Thailand, Singapore, Malaysia, which achieved massive GDP growth. However, a significant risk was embedded in the achievement. These three countries were most severely affected by the Asian Financial Crisis. As a result, Southeast Asian countries suffered from severe damage to their currency values and stock markets.

Accordingly, this study included a sample consists of firms listed on the three Southeast Asian stock markets. Precisely, our selection consists of 159 firms listed on the three Asian stock markets from 2013 to 2017. Since not all listed firms had already published their financial reports when we conducted this study, our sample has included 54 Malaysian listed firms, 63 Thailand listed firms, and 42 Singaporean listed firms. All the firms were selected based on the availability of data sources from annual reports and Bloomberg Terminal. Financial firms and banks are excluded from the sample due to the different capital structures in these financial institutions and special rules. According to the thumb rules proposed by Roscoe in 1975, who stated that an appropriate sample size would be between 30–500 firms (Sekaran and Bougie, 2010). In a similar vein, Alreck and Settle (2002) suggested that the optimal sample size should not be more than 10% of the target population to get the best results. Accordingly, our study included 54 out of 920 firms listed on Bursa Malaysia, representing 5.87% of the target population in Malaysia. In comparison, our sample contains 63 out of 688 firms listed on the Stock Exchange of Thailand, which represents 9.16% of the target population in Thailand. In addition, our selection involves 42 out of 754 firms listed on the Singapore Exchange, which means about 5.57% of the target population.

3.2 Data collection method

The data needed for this study are collected from the Bloomberg database and companies' annual reports. Our sample includes firms listed on the Southeast Asian stock markets. Still, we excluded those companies with insufficient data and companies that do not provide the English version of their annual reports. We also eliminated those Asian firms that do not have regular financial reporting published annually. We ended with 159 firms, and we collected their data from their annual reports. Additionally, the financial data, such as total assets, average total assets, and net income, were converted from local currencies into USD using the average exchange rate to unify the currency for all listed firms included in this study and to perform an accurate comparison.

Panel data refers to data that includes time-series observations for several subjects simultaneously (Hsiao, 2007). Therefore, panel data combines both time series and cross-sectional data simultaneously, which can provide robust analysis. Thus, panel data are collected about non-financial firms listed on three Asian stock markets, including Bursa Malaysia, Stock Exchange of Thailand (SET), and Singapore Exchange (SGX) over 2013–2017. Panel data are collected due to its advantages, which is the more accurate inference of model parameters. In addition, panel data often include more freedom and higher sample variability than cross-sectional data, thus enhancing economic estimates' efficiency (Hsiao and Tahmiscioglu, 1997). The final sample

collected consists of 159 firms listed on three Asian stock markets from three different Asian countries, including 54 Malaysian firms, 63 Thailand firms, and 42 Singapore firms listed on the stock exchange in their own countries from 2013 to 2017.

3.3 Variables definitions and measurement

This section presents all variables included in this study and their measurement scales.

3.3.1 Dependent variable

Return on assets (ROA) was the dependent variable applied in this research used as a proxy for listed firms' financial performance. Prior studies have used several financial ratios to determine the relationship between corporate governance and firm performance, such as Tobin's Q, ROA, ROE, EPS, Net profit margin (Pearce and Zahra, 1992; Mak and Kusnadi, 2005; Chuanrommanee and Swierczek, 2007; Ramdani and Witteloostuijn, 2010; Zabri et al., 2016). Consistent with previous studies, we used return on asset (ROA) as a dependent variable in this study. Prior studies have also used ROA as a ratio to measure corporate financial performance (Bhatt and Bhatt, 2017; Erhardt et al., 2003; Mak and Kusnadi, 2005; Zabri et al., 2016). Therefore, we utilised accounting-based measures (ROA) to assess the financial performance of Asian-listed firms. This measure aligns with the standard analytical practice done by some empirical studies (Bruett et al., 2005). It is calculated by dividing net income by the average of total assets. The average of total assets is applied instead of total assets to explain the financial performance better.

3.3.2 Independent variables

This study applied three board characteristics as independent variables, including board size, board independence, and CEO duality. Board size refers to the total number of directors on board. Jensen (1993) mentioned that an effective board should include a maximum of eight directors, while some companies in the three countries have more than eight directors. Jensen (1993) and Lipton and Lorsch (1992) also argued that a large board of directors would be less effective and gives the CEO greater control. Board independence refers to the proportion of independent non-executive directors to the total number (in percentage %). Both Liu et al. (2015) and Müller (2014) concluded that board independence is associated with greater profitability. The third independent variable was CEO duality, which refers to the chief executive director (CEO) and the chairman. The individual plays two roles in a company (Thrikawala et al., 2013). CEO duality is measured as a dummy variable, coded as one when the same person holds the two positions and coded zero when different individuals have both roles.

3.3.3 Control variables

Control variables included in this research prevent over or underestimate the effect of independent variables on the dependent variable and increase confidence for data analysis. Control variables are used to correctly estimate the impact of independent variables on the dependent variable and enhance the analysis's confidence. Moreover, the selected control variables in this study consist of firm size, leverage (debt structure), and asset structure. For example, firm size is measured in terms of the book value of the

company's total assets. Companies' total assets are converted into one single currency that was a million USD for better comparison. Leverage refers to the ratio of total debts (long-term and short-term debts) to total assets. The use of leverage is a method to boost firm performance (Champion, 1999). At the same time, asset structure refers to the proportion of fixed assets to total assets. According to Dalton et al. (1998) and De-Jong et al. (2002), firm size and leverage are the determinants of corporate performance. Leverage has been used by Gleason et al. (2000) to examine the relationship with financial performance (ROA) and found that total debt significantly negatively affects performance. Prior research has used firm size as a control variable to empirically control for firm size (Black et al., 2006). Consistent with the preceding study (Abor, 2007), this study uses the natural logarithm of total assets as a proxy for firm size. Table 1 shows all variables included in our research and their measurement scales as well.

Table 1 Summary of all variable's definitions and their measurements scales

Variables codes	*Variables definitions*	*Measurements of variables*
Dependent variable		
ROA	Return on asset	Net income/average total assets
Independent variables		
BS	Board size	Total numbers of directors serving on board
BI	Board independence	Percentage of the total number of independent non-executive to the total number of directors on board
CD	CEO duality	Dummy variable of 1 if chairman and CEO held by the same person, and 0 if both positions held by separate individual
Control variables		
LNTA	Firm size	Natural logarithm of total assets
LVR	Leverage ratio	Total debts/total assets
AS	Assets structure ratio	Fixed assets/total assets

3.4 Data analysis and model specification

Data collected for this study were analysed using STATA 15 software to determine the relationship between the dependent and independent variables because it is more suitable for panel data analysis. Different types of data analysis techniques have been applied to obtain reliable findings. For instance, the descriptive analysis provides a complete picture or overview of the data collected and referenced. Moreover, correlation analysis was also run to evaluate how our variables correlate and initially determine whether our independent variables are highly correlated to avoid multicollinearity problems. Furthermore, pooled OLS regression model was also applied to examine the relationship between corporate governance and firm performance. However, Wintoki et al. (2012) reported that the relationship between corporate governance and financial performance might suffer from the endogeneity problem, which disturbance terms can capture.

Additionally, the violation of the OLS assumptions may also cause incorrect conclusions. Hence, fixed and random effects models for panel data were applied to avoid the disadvantages of using OLS regression. Previous studies (e.g., Jakpar et al.,

2019) applied the Hausman test to distinguish between fixed effects and random effects models to acquire accurate results. This study, therefore, employed the Hausman test (1978) to choose between fixed and random effects models. Hausman test has shown that the fixed effects model is the most suitable model for our study. This study investigates how corporate governance practices affect the financial performance of firms listed in Asian Stock Markets. Hence, the following regression model was estimated:

$$\mathrm{ROA} = \beta_0 + \beta_1 \mathrm{BS} + \beta_2 \mathrm{BI} + \beta_3 \mathrm{CD} + \beta_4 \mathrm{LNTA} + \beta_5 \mathrm{LVR} + \beta_6 \mathrm{AS} + \varepsilon_i$$

4 Data analysis

This section presents the test results generated using several data analysis methods, including descriptive and correlation analyses, followed by OLS regression and a fixed-effects model.

4.1 Descriptive statistics

Panel A of Table 2 presents the summary of descriptive statistics for the variables used in this study using the final sample of 54 firms listed on Bursa Malaysia from 2013 to 2017. The mean ROA is 8.39, which indicates that the average ROA of Malaysian firms is 8.39%. However, the mean ROA of Malaysian firms is higher than in other developed countries such as Hong Kong (Chen et al., 2005). While, regarding the corporate governance characteristics, the result was similar to Zabri et al. (2016), who found that the mean ROA was around 8%. For the board size (BS), the average board size within Malaysian listed firms is approximately nine members, consistent with the optimal board size recommended by Jensen (1993), while the maximum number of directors on board is 15. Although some studies suggested that a larger board size would cause the firm performance to be ineffective, in contrast, some researchers claimed that a larger board size would increase a firm's profitability. The average of independent directors is 48.77%, close to the recommended MCCG 2017 as 50% of the total board to supervise the management effectively. The result indicates that it is in line with the requirement of MCCG 2017. Also, the average board independence of 50% meets and is above the Securities Commission's minimum requirement as that of 33% of total board directors. The CD's result indicates that only 6% of firms practice dual leadership, which meets the recommendation of MCCG by having non-CEO duality.

Malaysian firms have the highest mean ROA, which is 8.39%, among the three countries. While, regarding corporate governance characteristics, Thailand firms have the largest mean board size, which contains 12.56 directors on average. In contrast, the least number of directors on board refer to Singapore firms, including three directors within the board. Whereas, Singapore and Malaysia samples have a similar average board size, nine directors on board, which is in line with Leblanc and Gillies (2005) study that suggested including eight to 11 directors on board. On average, three countries have met and above the recommended percentage for board independence structure which is 33.33%. The results show that Singaporean firms perform dual leadership more than Malaysian and Thailand firms, representing 31% of the sample for Singaporean firms.

Table 2 Descriptive statistics for firms listed on three Asian stock markets over 2013–2017

Variables	*Mean*	*S.D*	*Min*	*Max*
		Panel A: Bursa Malaysia		
ROA	8.385	11.86	–34.85	73.07
BS	8.948	2.025	4	15
BI	48.77	12.12	30	88.89
CD	0.0593	0.237	0	1
LVR	25.8	16.18	0	62.55
AS	39.71	18.56	1.087	89.5
LNTA	7.804	1.278	5.014	10.41
		Panel B: Thailand Exchange		
ROA	6.193	7.706	–27.21	48.67
BS	11.56	3.236	5	21
BI	42.65	9.62	25	77.78
CD	0.0987	0.299	0	1
LVR	30.08	17.31	0	84.26
AS	42.15	20.73	2.25	83.74
LNTA	6.658	1.771	2.729	10.06
		Panel C: Singapore Exchange		
ROA	4.561	8.308	–57.78	37.71
BS	8.581	2.646	3	18
BI	59.71	15.13	33.33	90.91
CD	0.31	0.463	0	1
LVR	24.17	18.27	0	92.07
AS	31.66	20.01	0	76.17
LNTA	8.211	2.619	–0.776	17.25

Panel B of Table 2 reports the descriptive statistics of the variables for the sample of 63 firms in Thailand. The results show the ROA ranges from –27.21 to 48.67, with an average of 6.19. This result is consistent with the study done by Yammeesri and Herath (2010). In comparison, the board size ranges from 5 to 21 directors, with an average of 12.56 directors. The mean of board independence is 42.65%, while the minimum rate is 25% which is relatively low compared to Malaysia. In terms of CEO duality, the result shows that, on average, only 9.8% of firms in the sample have no separation of roles between chairman and CEO within the board. The mean leverage is 30.08%, and the mean asset structure is 42.15%. The average firm size is USD 6.66 million in total assets.

Panel C of Table 2 shows the descriptive statistics for Thailand's Stock Exchange firms. The ROA result shows that listed firms in Singapore have an average of 4.56%, while the lowest ROA recorded was –57.78%. In comparison, the board size ranges from 3 to 18 directors, with an average of 8.58 directors, which is quite similar to Witt and Redding (2014). Simultaneously, the minimum percentage of independent non-executive directors is 33.33%, the best-suggested rate for board structure. However, 31% of chief executive officers of listed firms in Singapore have CEO duality, which is in line with

what was reported by Nguyen et al. (2014). This number represents the highest figure among the three Southeast Asian countries included in this study. In addition, firm size has a mean of 8.21 million USD, the average asset structure is 31.66, while Singapore firms have the leverage of 24.17 on average.

4.2 Correlation analysis

Panel A of Table 3 presents the correlation between all variables related to Bursa Malaysia's firms, followed by the variance-inflating factor (VIF) to check the multicollinearity problem. However, the VIF results indicate that the sample data did not suffer from multicollinearity problems as all the VIF results are less than the value of 10. The results also report an insignificant correlation among our independent variables as the maximum correlation is only 0.107, which is between board size and CEO duality. In contrast, board size is negatively correlated with board independence.

Table 3 Correlations matrix of CG variables related to firms listed on Asian Stock Markets

Variables	*ROA*	*BS*	*BI*	*CD*	*AS*	*LVR*	*LNTA*	*VIF*
Panel A: Bursa Malaysia								
ROA	1							
BS	–0.203	1						1.13
BI	–0.077	–0.165	1					1.16
CD	–0.1	0.107	0.107	1				1.12
AS	–0.07	0.151	0.241	–0.002	1			1.14
LVR	–0.217	0.139	–0.159	–0.049	–0.006	1		1.18
LNTA	–0.473	0.209	0.076	0.26	0.182	0.317	1	1.3
Panel B: Thailand Exchange								
ROA	1							
BS	–0.1342	1						1.59
BI	–0.0177	0.0017	1					1.16
CD	–0.0188	–0.2103	–0.142	1				1.17
AS	–0.1313	0.228	–0.001	–0.128	1			1.22
LVR	–0.3792	0.162	–0.112	0.22	0.281	1		1.51
LNTA	–0.0597	0.514	0.215	–0.002	0.035	0.405	1	1.87
Panel C: Singapore Exchange								
ROA	1							
BS	0.105	1						1.21
BI	0.036	0.134	1					1.09
CD	–0.087	–0.378	–0.128	1				1.26
AS	0.021	–0.016	0.214	–0.243	1			1.25
LVR	–0.337	0.06	–0.082	–0.057	0.148	1		1.07
LNTA	–0.012	0.108	0.079	–0.183	0.325	0.211	1	1.17

Panel B of Table 3 presents the correlation matrix between all variables related to Thailand Exchange firms. It shows an insignificant correlation among independent variables as the maximum correlation is 0.514 between board size and firm size. Besides, the VIF results imply no multicollinearity problem since all the VIF values are less than 10. Panel C of Table 3 shows the correlation matrix between all variables related to firms listed on Singapore Exchange. The most significant correlation coefficient among independent variables is 0.134, below the threshold of 0.80 recommended by Damodar (2004). This result implies that multicollinearity is unlikely a severe issue in the estimations. Similarly, the multicollinearity test diagnostic shows that all the values of VIF for all variables are lower than the limit value of 10. This result means that there is no multicollinearity problem in our regression estimations.

4.3 Multivariate regression analysis

Three regression model estimations have been employed to examine the relationship between corporate governance mechanisms and firms' financial performance listed on Asian stock markets. These three regression models include pooled ordinary least square model (OLS), the fixed effects model (FE), and the random effects model (RE). The OLS regression assumptions were checked by employing two diagnostics tests. These diagnostics tests comprise the Wald test for heteroscedasticity and the Wooldridge test for autocorrelation. In contrast, the autocorrelation problem was checked previously in the correlation matrix table using VIF test values. Table 4 shows the OLS diagnostic tests' results related to heteroscedasticity and autocorrelation problems. It reports that the p-value of the heteroskedasticity test is lower than 0.05. Thus, it is statistically significant at the 5% significance level. Therefore, the null hypothesis is rejected (H_0: homoskedasticity). This result indicates the problem of heteroskedasticity incurred in the three estimation models for all Asian countries. It also shows that the p-value of the autocorrelation test is lower than 0.05, which is statistically significant at the 5% level. Hence, the null hypothesis is rejected, referring to an autocorrelation problem in the proposed fixed-effects model. In contrast, the p-value for the autocorrelation test in the fixed models related to Thailand and Singapore is higher than 0.05. This result means that there is no autocorrelation problem in the proposed fixed-effects models.

Table 4 provides the result of all diagnostics tests used to check the assumptions of OLS and fixed-effects models. For example, both the F and Breusch and Pagan Lagrangian multiplier tests show a p-value lower than 0.05, and null hypotheses are rejected. This result means that OLS regression is not an appropriate data analysis technique. After running fixed and random effects models, the Hausman test was employed to choose between fixed and random effects models, and it shows that the p-value is less than 0.05. Thus, it is statistically significant at the 5% level. This result means that the null hypothesis is rejected, which implies the fixed effects is the appropriate model for data analysis.

Table 4 Results of regression estimations of CG on ROA of three Asian stock markets

ROA	*Bursa Malaysia*		*Thailand Exchange*		*Singapore Exchange*	
	OLS	*Fixed effects*	*OLS*	*Fixed effects*	*OLS*	*Fixed effects*
BS	–0.748**	–0.268	–0.454***	–0.410***	0.344	0.864*
	(–0.333)	(–0.24)	(–0.154)	(–0.119)	(–0.225)	(–0.506)
BI	–0.091	–0.088*	–0.098**	–0.052	–0.017	–0.019
	(–0.056)	(–0.051)	(–0.044)	(–0.059)	(–0.037)	(–0.05)
CD	1.643	–2.929	0.964	1.175	–0.914	0.199
	(–2.835)	(–3.651)	(–1.435)	(–2.055)	(–1.314)	–(1.283)
AS	0.032	–0.013	0.017	0.027	0.026	–0.007
	(–0.036)	(–0.039)	(–0.021)	(–0.032)	(–0.03)	(–0.05)
LVR	–0.054	–0.174**	–0.217***	–0.240***	–0.165***	–0.201***
	(–0.043)	(–0.075)	(–0.028)	(–0.041)	(–0.031)	(–0.058)
LNTA	–4.025***	–2.942***	1.134***	1.176***	0.083	–0.008
	(–0.565)	(–0.818)	(–0.306)	(–0.237)	(–0.224)	(–0.444)
Cons	50.943***	43.186***	13.792***	11.172***	5.394	3.621
	(–5.348)	(–4.739)	(–2.496)	(–3.454)	(–3.409)	(–8.159)
Observations	270	270	315	315	210	210
R-squared	0.248	0.22	0.191	0.206	0.138	0.165
F test	20.724		7.0586		4.281	
P-value	0.000		0.000		0.000	
Breusch and Pagan LM						
Chi-bar2	299.95		162.91		44.65	
Prob > chi-bar2	0.000		0.000		0.000	
Wald test						
Chi2 (54)	14.00		28.29		30.05	
Prob>chi2	0.000		0.000		0.000	
Wooldridge test						
F (1, 53)	6.022		3.519		0.04	
Prob > F	0.017		0.065		0.842	
Hausman test						
Chi		28.83		15.75		16.37
P-value		0.000		0.015		0.012

Notes: Standard errors are in parenthesis.
***p < 0.01, **p < 0.05, *p < 0.

Panel corrected standard errors approach (PCSEs) is employed to mitigate the heteroscedasticity and autocorrelation problems. Many researchers have adopted the PCSE estimator to correct heteroscedasticity and autocorrelation in models (Hoechle, 2007). PCSE approach was applied since it performs substantially better results than the FGLS estimator in many circumstances. The corrected fixed-effects models are shown in Table 4, which shows the impact of corporate governance practices on firms' financial performance listed on three Asian stock markets from 2013 to 2017. The fixed-effects Model for Malaysian listed firms in Table 4 shows that board independence has a significant negative association with ROA. The fixed-effects model for Thailand listed firms in Table 4 displays that board size has a negative and meaningful relationship with ROA. Furthermore, the fixed-effects Model for Singaporean listed firms in Table 4 demonstrates that board size in Singaporean listed firms is positively and significantly at 10% correlated with ROA, which aligns with our expectations.

5 Findings and discussion

Table 4 shows the corrected fixed-effects models for the estimations of three Asian countries (Malaysia, Thailand, and Singapore). Table 4 reports that board size (BS) has a significant negative association with the financial performance (ROA) of firms listed on Bursa Malaysia. This result is consistent with the results reported by Jakpar et al. (2019). However, Board size is negatively and significantly at (–0.410, $p < 0.01$) correlated with financial performance (ROA) of firms listed on the Thailand exchange, which is consistent with the finding reported by Mak and Kusnadi (2005). Consistent with our proposed hypothesis, the results of this study show that board size is positively and significantly (0.864, $p < 0.1$) correlated with financial performance (ROA) of firms listed on the Singapore stock market, this result applies to the research done by Abidin et al. (2009). This finding is consistent with the expectation of resource dependency theory that suggests that it is expected to positively affect two mutual variables (Dalton et al., 1998). In addition, the finding of firms listed on the Thailand exchange aligns with agency theory that suggests an inverse relationship between board size and firm performance (Jensen, 1993).

Table 4 shows that board independence (BI) is negative and statistically (–0.088, $p < 0.1$) correlated with financial performance (ROA) of firms listed on Bursa Malaysia. This result implies that board independence would not enhance firm performance. This result is against the second hypothesis, suggesting a positive correlation between board independence and corporate financial performance. This result is in line with the findings reported by Hermalin and Weisbach (2001), who found that a higher proportion of independent directors would not improve firm performance. The negative relationship might happen because of the independent directors' lack of information and knowledge about the firm (Koontz, 1967). Our results show that board independence has an insignificant impact on ROA in Thailand and Singapore stock markets. This finding is similar to what was reported by prior studies (Jakpar et al., 2019; Zabri et al., 2016).

In terms of CEO duality (CD), our findings show an insignificant association between CEO duality and ROA in the three regression models. The results differ from the third hypothesis developed, which proposes a significant negative relationship between CEO duality and firm performance. Our finding is in line with the study conducted by Mustapa

et al. (2015) and Yusoff and Alhaji (2012), who found an insignificant relationship between the two variables. The CEO duality has a negligible association with firm performance (ROA) in the Malaysian stock market. In contrast, it has a significant positive relationship with ROA in two Asian countries (Singapore and Thailand). However, based on descriptive statistics, the ROA for Singaporean companies was the lowest among the three Asian countries. This finding has been obtained because Singaporean samples have the highest percentage of Asian firms practising dual leadership. Hence, having CEO duality in the company would cause the board not to perform effectively, linking to agency theory that suggests separating the two roles to reduce potential conflicts among the directors. Arguably, corporate governance has impacted the firm performance in the three Asian countries, affected by board size and board independence. However, most of the results are against the research hypotheses except the board size in firms listed on the Singaporean stock market.

Regarding control variables, leverage (LVR) and firm size (LNTA) significantly influence corporate financial performance in the three regression models, respectively, at the 1% and 5% significance level except for the firm size in the Singaporean model. The results show leverage has a significant negative impact on financial performance. While the firm's size affects the financial performance of Thailand's companies, it does not affect ROA in Bursa Malaysia. Asset structure (AS) has an insignificant association with the financial performance of firms listed in the three Asian stock markets.

6 Conclusions

This study examined the impact of corporate governance practices on firms' financial performance listed on three top Asian stock markets: Bursa Malaysia, Stock Exchange of Thailand, and Stock Exchange of Singapore. This study shows that the financial performance (ROA) of Asian listed firms has solely influenced two board characteristics: board size and board independence. Specifically, board size has a positive relationship with financial performance, but only for firms listed on Singapore Exchange. Our findings show a negative and significant association between board independence and firms' financial performance listed on Bursa Malaysia. However, our results found an insignificant relationship between CEO duality (CD) and firms' financial performance listed on the three Asian stock markets. This result might happen because it is hard for individuals to perform two different roles simultaneously (Mustapa et al., 2015). This study also finds that larger firms are associated with more unsatisfactory firm performance in Malaysia. In comparison, larger firms experienced higher financial performance in Thailand, whereas asset structure is not significant for firms listed on the three Asian stock markets.

Our study provides important implications for theory, practice, and policymakers in Southeast Asian countries. First, this study supports resource dependence theory, suggesting that corporate inter-correlations among stock markets can exchange skills and knowledge between a board of directors. This implication enhances the mutual connection with the external environment and improves firms' financial performance listed on Asian stock markets. Second, this study also provides a significant implication for agency theory, which assumes that a separation between chairman and CEO roles can handle the conflict of interest among top managers. Hence, Asian listed firms need to issue shares for public shareholders to get new financial resources and enhance their

financial performance since most Asian firms are owned and directed by business families. Third, this study offers important implications for the practical usefulness of employing good corporate governance practices in improving the financial performance of firms listed on the Asian stock market. Therefore, Asian listed firms must reduce the number of people on board to achieve the optimal board size that helps listed companies achieve positive financial advantages. Our evidence suggests a negative association between board size and the financial performance of Asian stock exchanges. Fourth, this study provides implications for policymakers in two Asian markets: Bursa Malaysia, and the Thailand Exchange, to issue good governance codes that appoint an optimal number of independent directors. Finally, our results show a negative relationship between firm performance and board independence in these two Asian stock markets. Whereas better-governed listed firms are more likely to have a lower number of independent directors with a consequential positive effect on corporate financial performance.

This study has some limitations that we have acknowledged. Specifically, our sample comprises 159 listed firms from the top three Asian countries regarding GDP because of the limited availability of needed data. Future studies could include a large sample size from Asian listed firms, allowing greater generalisability and reliability. Moreover, this study has employed three corporate governance mechanisms to examine their impact on the financial performance of Asian listed firms in Malaysia, Thailand, and Singapore. Therefore, future studies should include other corporate governance mechanisms, such as board structure and ownership concentration, if they become available. Furthermore, further investigation might consist of external corporate governance mechanisms to investigate their impact on corporate financial performance, such as product and labour markets. Additionally, future studies might use different financial indicators to measure the financial performance of Asian listed firms, such as ROE ratio, quick ratio, debt to equity ratio, current ratio, earnings per share, and price to earnings ratio. Finally, this study is limited to 5 years period time horizon. Hence, future research might extend the data up to 10 years to achieve more reliable findings and provide more accurate results.

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