

**OWNERSHIP STRUCTURE AND STOCK MARKET  
IMPLICATIONS OF FORWARD-LOOKING AND RISK  
DISCLOSURE: EVIDENCE FROM ASEAN LISTED  
COMPANIES**

**BY**

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## **DECLARATION**

The work referred to in this thesis has not been submitted elsewhere in order to seek another degree or qualification of this or any other university or other institute of learning.

The word count of this thesis is 118,545 including references and appendices (105,022 words excluding references and appendices).

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## LIST OF ABBREVIATIONS

|          |   |
|----------|---|
| ASEAN    | : The Association of South-East Asian Nations   |
| FDI      | : Foreign direct investment   |
| AEC      | : ASEAN Economic Community  |
| AFA      | : The ASEAN Federation of Accountants   |
| AFTA     | : ASEAN Free Trade Area   |
| AIMR-FAF | : The Association for Investment Management and Research -<br>Financial Analysts Federation   |
| ASCG     | : Accounting Standards Committee of Germany   |
| ASEAN-4  | : The group of newer members of the ASEAN (Cambodia, Laos,<br>Myanmar, Vietnam)   |
| ASEAN-6  | : The group of five founding members of the ASEAN (Indonesia,<br>Malaysia, Thailand, Philippines, Singapore) and Brunei<br>Darussalam |
| CEPT     | : Common Effective Preferential Tariff  |
| CICA     | : The Canadian Institute of Chartered Accountants   |
| CSR      | : Corporate social responsibility   |
| FTSE     | : Financial Times Stock Exchange Group  |
| GAAP     | : Generally Accepted Accounting Principles  |
| GDP      | : Gross domestic product  |
| IAS      | : International Accounting Standards  |
| ICAEW    | : The Institute of Chartered Accountants in England and Wales   |
| IFRS     | : International Financial Reporting Standards   |
| IPO      | : Initial Public Offerings  |
| MNCs     | : Multi-national Companies  |
| MNEs     | : Multi-national Enterprises  |
| NAFTA    | : The North America Free Trade Agreements   |
| OECD     | : The Organisation of Economic Cooperation and Development  |
| SEC      | : US Securities and Exchange Commission   |
| SOEs     | : State-owned enterprises   |
| UNCTAD   | : United Nations Conference on Trade and Development  |
| WBCSD    | : The World Business Council for Sustainable Development  |

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## ABSTRACT

This study aims to examine the extent of forward-looking and risk disclosure in annual report narratives of listed companies in ASEAN member countries – namely, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam – over the period 2009 to 2017, and to explain the role played by ownership structure in explaining that extent. Additionally, the study investigates the value relevance of forward-looking and risk information disclosed by listed firms in ASEAN countries. An automated content analysis is applied to measure the extent of forward-looking and risk disclosure by employing the text search function in QSR NVivo 12 to count the frequency of keywords in annual report narratives.

The study finds empirical evidence about the impact of ownership structure on the level of forward-looking and risk disclosure in ASEAN countries and the non-linear association is more pronounced. Institutional ownership has a U shaped relationship with forward-looking information and a positive association with risk information. This phenomenon is explained by the presence of short-term and long-term institutional investors in ASEAN firms' ownership structure. Meanwhile, the positive impact on risk disclosure suggests that institutional investors consider risk information as a crucial content in annual reports. In contrast, the levels of forward-looking and risk disclosure reach a maximum at a turning point of foreign ownership, as illustrated by an inverted U shape. This indicates the difference in the impact of foreign and domestic institutional shareholders on corporate disclosure decisions. Foreign institutions, faced with greater information risks of offshore investments, have the incentive to employ disclosure to obtain legitimacy but become entrenched at high levels of shareholdings to avoid excessive proprietary costs. Managerial and government ownership are only significant when explaining the level of risk disclosure and the associations are both U shape. This result partly supports the alignment effect of managerial ownership in promoting corporate public disclosure and the power of the government in inducing their investee firms to pursue transparency.

Ownership structure also affects managers' propensity for the topics and the tone of disclosure. The study finds a significant impact of ownership on the dissemination of forward-looking information about financial performance and business environment but a negligible effect on non-financial information such as future strategies and business structure. Ownership is not significant in explaining the qualitative attributes of risk disclosures. There is further evidence that managers have the incentive to employ the positive tone of future-related information to impress investors with the company's prospects. Meanwhile, a non-linear association is observed between institutional/foreign ownership and the tone of risk disclosure.

The value relevance of forward-looking and risk information in ASEAN listed companies' annual reports is mainly observed via stock returns and stock volatility. Overall, stock returns after the disclosure of forward-looking information are improved while they are less volatile when more risk information is disclosed. Among the forward-looking topics, strategy-related information is most useful for investors in estimating firm value. Positive future news is associated with higher stock returns whereas stock volatility increases with the negative tone of risk disclosure.

# CHAPTER 1: INTRODUCTION

## 1.1. Background of the study

Corporate communication is crucial for decision-makers in the stock market. In addition to numeric information in accounting statements, there is a vast amount of textual information in corporate disclosures which is generally unstructured and hard to verify (Core, 2001; Li, 2010a). Investigating the textual content of corporate communication would enhance the understanding of financial information and thereby assist investors to make better decisions. The existing literature has documented that ownership structure is associated with variations in disclosure levels (Makhija and Patton, 2004; Luo et al., 2006; Huafang and Jianguo, 2007; Donnelly and Mulcahy, 2008; Jiang and Habib, 2009).

Ownership structure plays a crucial role in shaping companies' attitudes and behaviours since different shareholders have different expertise and monitoring preferences (Simerly and Bass, 1998). To mitigate the potential conflict of interest between management and ownership, one solution suggested by the agency theory is to offer share ownership to managers. Stock incentives align managers' interests with those of shareholders, making disclosure decisions more appropriate and value-relevant (Healy and Palepu, 2001). When holding the company's shares, managers are also incentivised to improve the level of disclosure to signal their management competence or to reduce the cost of capital.

On the other hand, professional owners, such as institutions and foreign investors, and legitimate stakeholders like governments, have the knowledge and power to influence management's decision-making. Institutional owners, with investment expertise and experience in different markets, strengthen the monitoring of managers' behaviour and therefore promote a rich corporate information environment (Dhaliwal et al, 1982; Rajgopal et al., 1999). This type of shareholder is more likely to obtain significant shareholdings which allow them to earn managers' urgent responses. Meanwhile, firms with foreign ownership may be more attentive to disclosure as they face higher



costs related to the geographical distance, the unfamiliarity with local regulations and customs (Douma et al., 2006; Mangena and Tauringana, 2007). Moreover, these types of shareholders may influence the company-stakeholder relationships and subsequently affect the level and quality of corporate disclosure (Smith et al., 2005). For example, governments may be concerned about political and social issues which stimulate the dissemination of stakeholder-related information in their firms whereas foreign investors may aim at aligning the local environmental practice with international standards. Empirical literature on the determinants of disclosure shows that ownership structure plays a significant role in explaining the extent of information disclosed by firms (Jensen and Meckling, 1976; Dhaliwal et al, 1982; Jensen and Ruback, 1983; Shleifer and Vishny, 1997; Rajgopal et al, 1999; Eng and Mak, 2003; Makhija and Patton, 2004; Barako et al., 2006; Luo et al., 2006; Huafang and Jianguo, 2007; Donnelly and Mulcahy, 2008; Jiang and Habib, 2009; Hidalgo et al., 2011; Haddad et al., 2015; Liu et al., 2016; Hu et al., 2017; Allaya et al., 2018; Alnabsha et al., 2018; Wang et al., 2018).

The Association of South-East Asian Nations (ASEAN) was established in the late 1990s and currently has 10 official members, including Singapore, Malaysia, Indonesia, Philippines, Thailand, Brunei Darussalam, Vietnam, Cambodia, Laos and Myanmar. The formation of the ASEAN aims at promoting a regional environment for economic growth, social progress, cross-border trade expansion and cultural development in the spirit of equality and partnership for prosperous and peaceful South-East Asian Nations (ASEAN, 2017, p.1). The region is poised to become the fourth largest economy in the world by 2030 and has great potential for development thanks to the regional governments' openness in trading with other markets (The ASEAN Now Report 2017).

Prior disclosure studies have focused on the mature capital markets of Western countries (Gray et al., 1995; Hussainey et al., 2003; Beretta and Bozzolan, 2004; Li, 2006; Linsley and Shrides, 2006; Abraham and Cox, 2007; Donnelly and Mulcahy, 2008; Kravet and Muslu, 2013) and several Asian emerging markets such as Singapore (Eng and Mak, 2003); Hong

Kong (Chau and Gray, 2002) and China (Huafang and Jianguo, 2007; Qu et al., 2014). Limited research has documented disclosure practice in the South-east Asian countries which have been growing rapidly in recent years with an average annual GDP growth rate of 4.5% (World Bank Database, 2022). Moreover, there is no disclosure research to date looking at the ASEAN as a distinct group of countries which share a common view of political and economic development objectives.

Ownership in the ASEAN member countries has unique characteristics. While the government rarely has direct corporate ownership in Western developed markets, government ownership is prevalent in Asian emerging and developing markets due to the crucial role played by the government in developing fundamental business sectors (Eng and Mak, 2003; Luo et al., 2006). Almost all ASEAN countries were previously colonies of the US, the UK and other European countries and they rely on SOEs to develop the economy after independence. Although the privatisation of SOEs has been started since the late 1980s, the government nowadays still holds a large share in listed companies. For example, OECD (2019) reports that the level of government ownership in the largest 100 companies is highest in Malaysia with 42%, followed by Vietnam with 28% and Thailand with 21%. The lower figures in Indonesia and Singapore, 18% and 11% respectively, are still higher than the levels of institutional ownership in these countries. Some studies suggest that firms with government ownership are more likely to support the government's disclosure initiatives to maintain their legitimacy and continued access to financial resources (Ferguson et al., 2002; Hu et al., 2017). Additionally, the government is such a powerful and legitimate stakeholder that could earn managers' urgent responses to their concerns about social and environmental issues, which are regarded as pivotal by other stakeholders. However, government-owned firms in the ASEAN are criticised for the lack of efficiency, poor management, and low transparency (Astami et al., 2010; Caney and Hamilton-Hard, 2015; Musallam and Muniandy, 2017; Tu and Nguyen, 2021).

On the other hand, foreign ownership has been increasing in several ASEAN countries due to the trend of foreign listings among Asian companies and the

shifting of foreign diversification projects from other markets to the region. Among ASEAN countries, Singapore is the host market of around 70% of foreign listed companies in Asia (OECD, 2019). In addition, intra-regional investment is prevalent in the region. Singapore, Malaysia, and Thailand are the most active investors and Indonesia is the largest host market (OECD, 2018). Meanwhile, the ASEAN governments' efforts in liberalising their capital markets to attract foreign investment since the late 1990s facilitate foreign ownership in the region. Foreign investment in the ASEAN region comes from a variety of origins such as East Asia, Europe, North America, China, and intra-regional investors including Singapore and Malaysia (OECD, 2019). Foreign investors likely attempt to bridge the information gap with domestic counterparts by inducing their firms to increase disclosure (Haniffa and Cooke, 2002; Barako et al., 2006; Wang et al., 2008). These investors are also more familiar with international reporting standards which enrich the corporate information environment (Khanna et al., 2004). On the other hand, managers also have incentives to exert transparency to maintain or attract more foreign investment in their companies (Huafang and Jianguo, 2007).

Moreover, the weak institutional setting in the ASEAN countries may affect the role played by managerial ownership in aligning the managers' interests with those of shareholders in primary research (Jensen and Meckling, 1976; Jensen and Ruback, 1983; Shleifer and Vishny, 1997; Makhija and Patton, 2004). More than half of the countries in this group develop their regulations based on a civil-law system which is associated with government interventionism and high corruption (La Porta et al., 1999). Among the civil-law countries, Cambodia, Laos, and Vietnam are heavily influenced by the French civil-laws which are criticised to provide the weakest investor protection, compared to other legal systems (La Porta, 1998). There is also a weak market for corporate control, a high level of ownership concentration and weak legal enforcement in these countries (Craig and Diga, 1996; La Porta et al., 1998, 1999; Mak and Li, 2001). When there is lack of legal protections, managers are more likely to pursue their self-interests rather than shareholders' interests in decision-making (Jensen and Meckling,

1976). It is worthwhile to re-examine the effect of managerial ownership on information disclosure in such a weak information environment.

Additionally, while previous studies suggest that firms with institutional ownership are more likely to be surrounded by a rich information environment (Dhaliwal et al, 1982; Rajgopal et al, 1999; Donnelly and Mulcahy, 2008), the effect of institutional ownership on disclosure in ASEAN countries may be different due to the low levels of institutional ownership in this region. According to the OECD Equity Market Review in Asia 2019, institutional ownership in ASEAN countries ranges between 9% and 13% while the figures in the US, the UK and other European countries are 66%, 60% and 29% respectively. At low levels of shareholdings, the motivation, knowledge, and ability exhibited by this type of owner may have different implications on managers' disclosure decisions when compared to Western countries.

Although several studies have investigated the impact of ownership structure on disclosure in ASEAN countries, the focus has been on the level of ownership concentration rather than the identity of ownership (Chen and Ho, 2000; Connelly et al., 2012; Nguyen et al., 2017). Moreover, primary research up to date has been conducted under a single country context and focused on few countries in the region such as Malaysia (Musallam, 2015; Musallam and Muniandy, 2017), Singapore (Chen and Ho, 2000; Mak and Li, 2001; Eng and Mak, 2003; Ang and Ding, 2006) and Indonesia (Rhee and Wang, 2009; Darmadi and Sodikin, 2013; Soebyakto et al., 2018) while other ASEAN country members are largely ignored. In addition, the research interest has been focused on investigating the relevance of ownership to firm value rather than disclosure levels. Collectively, the existing literature reveals a clear research gap in the knowledge of the role played by ownership types in explaining corporate disclosure practice in ASEAN countries.

## **1.2. The research objectives of the study**

Corporate disclosure can be provided by a variety of means to help firms communicate with existing shareholders and approach potential investors. Nevertheless, Botosan (1997) asserts that the annual report provides the

most important source for corporate information because it is a major reporting document which is standardised and supervised by authorities. The common representation of annual reports allows the researcher to make cross-industry and cross-country comparisons of disclosure practices. This document is mostly used by investors, investment analysts and bank officers and other types of reports tend to supplement it (Knutson, 1992; Hassan and Christopher, 1996).

Alongside financial statements, annual report narratives provide critical information which assists users in understanding the business environment, their past results, growth prospects and risk profiles. Companies allocate a sizable amount of their annual reports to qualitative discussions which provide further explanation to financial statements, on which investors rely to interpret accounting information (Ibrahim and Hussainey, 2019; Habib and Hasan, 2020; Tran et al., 2021). Noh (2021) adds that annual report narratives serve as a key channel for stakeholder communication. Despite such potential value relevance, a vast amount of narrative reporting contains non-verifiable information due to its “soft talk” nature (Hassanein et al., 2019). The preparation of annual report narratives is subject to managers’ attribution and obfuscation (Noh and Park, 2022). This discretion motivates managers to employ narrative sections to revise or alter investors’ perceptions of firm value. Moreover, the relative delay in publishing annual reports may not be timely for decision-making (Hassanein et al., 2019). Collectively, the value-relevant information in annual report narratives is largely mixed up with boilerplate, generic and irrelevant information, making it questionable on their usefulness for decision-making.

Given the unique institutional setting of the ASEAN, this thesis aims at examining the level of forward-looking and risk information disclosure which is useful for investors as discussed in previous studies. Merely relying on historical information may lead investors to inaccurately anticipate future earnings (Hussainey, 2004; Li, 2010b; Al-Najjar and Abed, 2014; Muslu et al., 2015). Many studies confirm that either general voluntary forward-looking disclosures (Aljifri and Hussainey, 2007; Muslu et al., 2015) or specific forward-looking information about profits (Hussainey et al., 2003),

quantitative earnings forecasts (Kent and Ung, 2003; Wang and Hussainey, 2013), performance (Athanasakou and Hussainey, 2014) and sales forecasts (Qu et al., 2014) assists investors in predicting future performance. Meanwhile, risk information helps investors to determine the disclosing company's risk profile, market value and therefore enhances the accuracy of stock price decisions (Beretta and Bozzolan, 2004; Li, 2006; Linsley and Shrivs, 2006; Abraham and Cox, 2007; Elshandidy et al., 2013; Kravet and Muslu, 2013; Campbell et al., 2014; Elshandidy and Neri, 2015). Moreover, these two topics are included in many popular channels of corporate communication but are not subject to regulations for non-financial firms in ASEAN countries. This typical problem makes the level of forward-looking and risk information worth investigated for ASEAN listed firms.

The second objective of the thesis is to examine the impact of ownership on the disclosure of forward-looking and risk information in ASEAN listed firms. While previous studies have been focused on the level of ownership concentration in the region, this study looks at the identity of ownership because specific types of owners are different in their motivation, knowledge, and power to influence managers' decision-making (Donnelly and Mulcahy, 2008). The owners' incentive for disclosure also changes with their ownership levels as they consider the cost-benefit trade-off to maximize investment gains (Makhija and Patton, 2004, Laidroo, 2009). This thesis therefore extends the existing literature by discovering both potential linear and non-linear relationship between ownership structure and corporate disclosure.

The first ownership type of interest is government ownership due to the prevalence of state-owned enterprises and the ongoing privatisation of these companies in this region (Ang and Ding, 2006; Astami et al., 2010; Carney and Hamilton-Hard, 2015; Musallam and Muniandy, 2017; OECD, 2018; Tu and Nguyen, 2021). While some studies suggest that government-owned firms are more likely to support the government's disclosure initiatives (Ferguson et al., 2002; Eng and Mak, 2003; Luo et al., 2006; Ntim et al., 2012a; Zeng et al., 2012; Khan et al., 2013; Ntim and Sobaroyen, 2013; Alhazaimah et al., 2014; Haddad et al., 2015; Kaur et al., 2016; Hu et al.,

2017), other studies claim that firms with government ownership exert lower disclosure levels due to the low exposure to adverse legal actions (Megginson and Netter, 2001) and the pursuit of non-profit targets (Naser et al., 2006). This study complements prior literature by providing results for listed firms in the South-East Asian countries.

The second ownership type of interest is foreign ownership due to the growth of foreign equity capital from other Asian markets into the region and the growth of intra-regional investment. Several studies suggest that foreign investors have incentives to bridge the information gap between themselves and local investors to make their decision-making less risky. As a result, firms with foreign ownership are more likely to exert greater disclosure (Haniffa and Cooke, 2002; Barako et al., 2006; Wang et al., 2008; Al-Akra et al., 2010; Liu, 2015). On the other hand, these investors are associated with activism and expertise which potentially strengthen the monitoring of managers and improve disclosure decisions (Huafang and Jianguo, 2007). This thesis provides further evidence about the motivation of foreign shareholders to influence corporate disclosure in dynamic developing economies in the ASEAN.

The analysis also includes managerial ownership and institutional ownership as these types of owners have shown their role in explaining corporate disclosure in prior studies. While agency theory suggests that managerial ownership helps to align managers' interests and those of shareholders, a majority of empirical studies report that managers are more likely to withhold information to conceal their suboptimal behaviour when holding shares in the company (Eng and Mak, 2003, Gul and Leung, 2004, Akhtaruddin and Haron, 2010; Khan et al., 2013; Wang and Hussainey, 2013; Haddad et al., 2015; Hassanein and Hussainey, 2015; Liu, 2015; Beekes et al., 2016). On the other hand, institutional investors are expected to strengthen the corporate governance system as they have the incentive and ability to prevent managers' unethical behaviour (Khlif et al., 2017; Alnabsa et al., 2018).

The third objective of the research is to analyse the stock market implications of annual report narrative disclosure in ASEAN listed firms. Increased disclosure is expected to reduce information asymmetry among investors and subsequently make it easier for them to execute stock trades at reasonable costs (Heflin et al., 2005). Early primary research suggests that informative disclosures affect investors' uncertainty in estimating firm fundamentals and therefore influence stock returns (Barry and Brown, 1985; Clarkson et al., 1996), stock volatility (Lang and Lundholm, 1993; Healy et al., 1999) and stock liquidity (Diamond, 1985; Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994; Leuz and Verrecchia, 2000). These stock indicators are employed in this thesis to examine the value relevance of disclosure by ASEAN listed firms.

### **1.3. Research questions**

The study seeks to address the following questions:

Question 1: To what extent do ASEAN country listed companies disclose forward-looking and risk information?

Question 2: How does the level of forward-looking and risk information in annual report narratives vary with ownership types in ASEAN country listed companies?

Question 3: How does the stock market react to forward-looking and risk information in annual report narratives of ASEAN country listed companies?

Finding answers for these research questions is important for the understanding of corporate disclosure practice in developing and dynamic ASEAN stock markets which remain uncovered in the existing literature. The answer for the first research question provides an insight into "what" and "how" information is disclosed by ASEAN listed firms. By employing the content analysis of textual disclosures, this study supports previous studies which state that both quantity and quality of disclosure should be considered when measuring corporate disclosure (Beattie et al., 2004; Beretta and Bozzolan, 2004). As the analysis is conducted on a cross-country basis, the answer for the first question also reveals differences in the extent of



corporate disclosure between South-East Asian economies and other economies.

The answer for the second research question helps to better understand the determining effect of ownership structure on forward-looking and risk disclosures in annual report narratives. Theoretically, the thesis revisits disclosure-related theories in explaining the role of different ownership types in resolving the interest conflicts between managers and shareholders, between managers and stakeholders; and between majority and minority shareholders under the context of emerging stock markets (Jensen and Meckling, 1976; Healy and Palepu, 2001; Barako et al., 2006). Practically, the study responds to the need of analysing how different types of owner influence managers' decision-making in developing Asian stock markets (Eng and Mak, 2003; Makhija and Patton, 2004; Huafang and Jianguo, 2007). The thesis explores the impact of the government and foreign shareholders on corporate disclosure, which are uniquely associated with ASEAN countries and cannot be observed in Western developed markets. While the government intervention into business activities is popular in the ASEAN, foreign investors are motivated to divert their investment to these markets to take the advantage of cheap labour and low tax expenses (Huang and Shiu, 2009, Liang et al., 2012). The motivation of these investors in monitoring managers' decision-making may be different from those in developed economies. Moreover, the weak governance systems in ASEAN countries may also influence the effect of owners on managers' propensity to disclose information (La Porta et al., 1998; Claessens et al., 2000).

Finally, the third question helps to discover how investors perceive and react to corporate disclosure in ASEAN countries. While a vast amount of research in developed economies have been focused on examining the value relevance of disclosure in different aspects, the stock market implications of disclosure in ASEAN countries remain questionable. Emerging economies are dealing with more profound socio-economic challenges than developed economies, giving rise to information asymmetry (Ntim et al., 2012b). Therefore, the answer for the third question would enhance the understanding of whether forward-looking and risk information provided by

ASEAN listed companies is considered by investors in decision-making, and what qualitative aspects or content dimensions of information would be more important for investors.

#### **1.4. Research method**

Due to the large number of ASEAN listed firms and the size constraint of content analysis, the sample companies are chosen based on the stratified sampling technique which randomly chooses companies based on each country's proportion of listed companies in the region (Hair et al., 2019). The sample for testing the hypotheses consists of 795 listed companies in six ASEAN countries including Malaysia, Singapore, Indonesia, Thailand, Philippines, and Vietnam. The primary source used to evaluate the extent of disclosure is the narrative section of annual reports published by listed firms in the six ASEAN countries above. Considering the availability of English annual reports in ASEAN country members, the final sample includes 6,570 annual reports over the period 2009 to 2017.

Consistent with previous disclosure studies (Hussainey et al., 2003; Elzahar and Hussainey, 2012; Kravet and Muslu, 2013; Elshandidy et al., 2013; Campbell et al., 2014; Elshandidy et al., 2015; Elshandidy and Neri, 2015; Muslu et al., 2015; Allini et al., 2016; Allaya et al., 2018; Elgammal et al., 2018; Hassanein et al., 2019; Jia et al., 2019), this thesis employs the automated scoring process to capture the extent of disclosure. Textual data in annual report narrative sections is pre-processed, such as removing graphic content and parsing the text into sentences, to enable to the automated search queries in the QSR NVivo 12 software. The automated content analysis has two rounds of search queries using different lists of keywords. In the first round, the search queries count the frequency of sentences which contain at least one forward-looking (risk-related) keywords. In the second round, the search queries count the frequency of words related to the content dimensions or qualitative attributes of forward-looking (risk) disclosures to further analyse ASEAN listed firms' disclosure practice. In this round, the tone of disclosure is also measured by counting the frequencies of positive and negative words in forward-looking and risk-

related sentences. The resulting disclosure variables are tested manually and statistically to ensure their validity and reliability.

This study applies the fixed effect regression technique to evaluate the association between the four ownership identities – namely, institutions, managers, foreign investors, and the government - and the dependent risk and forward-looking disclosure variables. This technique is also adopted to uncover the association between forward-looking and risk disclosure and stock variables, including stock returns, stock volatility and stock liquidity. The regression models are controlled for firm characteristics, corporate governance factors, industry factors which can potentially affect corporate disclosure as suggested in previous studies. Regressions are also run for ASEAN countries grouped by legal system and income level to further examine the impact of country factors on disclosure practice.

## **1.5. The summary of research findings**

### **1.5.1. The extent of forward-looking and risk disclosure in annual reports**

The content analysis reveals that the level of forward-looking and risk information is relatively low in annual report narratives issued by ASEAN listed firms. In absolute terms, there is an average of 58 forward-looking sentences and 56 risk-related sentences in ASEAN firms' annual reports. In relative terms, forward-looking sentences account for average 5.62% and risk-related sentences account for average 5.17% of the total sentences in ASEAN firms' annual reports. The level of disclosure is largely varying across ASEAN firms.

In forward-looking disclosures, ASEAN firms discuss more about the topics of finance and corporate environment while information about strategy and corporate structure is relatively limited. The tone of forward-looking information is more inclined to positive than negative. Meanwhile, the amount of forward-looking information is very limited compared to the amount of quantitative information in ASEAN firms' risk disclosures. In

contrast to the tone of forward-looking disclosure, there is more negative news than positive news in risk disclosures.

### **1.5.2. The effect of ownership structure on forward-looking and risk disclosure**

The multivariate analysis shows that ownership structure is significant in explaining annual report narrative disclosures in ASEAN listed companies and the non-linear association is stronger. The results indicate different roles played by the four ownership types in explaining ASEAN firms' disclosure and the owners' different motivations for forward-looking and risk disclosure.

The nonlinearity is evidenced for the impact of institutional and foreign ownership on forward-looking disclosure, implying different investment strategies adopted by institutional and foreign investors in ASEAN country members. Meanwhile, the government, as a shareholder, negatively influences forward-looking disclosure. Managerial ownership has no impact on the extent of forward-looking information, indicating low managers' incentive for this type of disclosure.

Concerning risk disclosure, the non-linear association is reported for foreign and managerial ownership, suggesting that there is a certain level of ownership at which risk disclosure reaches its maximum (minimum). An inverted U-shaped association is observed between foreign ownership and risk disclosure, indicating that the extent of risk disclosure is maximum at a turning point of foreign ownership. Meanwhile, managers have more incentives for risk disclosure when their shareholdings are large enough. The effect of institutional ownership on risk disclosure is positive whereas that of government ownership is insignificant.

Ownership structure also influences the themes and tone of forward-looking disclosure. Shareholders of ASEAN listed firms are more likely to influence the disclosure of non-financial forward-looking topics, such as strategy and corporate environment. Meanwhile, institutional and foreign ownership are more significant in explaining the tone of forward-looking and risk disclosure.

### **1.5.3. The stock market implications of forward-looking and risk disclosure**

The regression results indicate that annual report narrative disclosures in ASEAN listed firms are more likely to influence stock returns and stock volatility than stock liquidity. Both forward-looking and risk disclosure are effective in reducing the volatility of stock returns but only forward-looking information affects realised buy-and-hold stock returns. Among the topics of forward-looking disclosure, information about finance and corporate environment reduces stock volatility while strategy-related information is incorporated in investors' stock valuations and therefore enhances stock returns and stock liquidity. In addition, investors are more likely to react to positive forward-looking news than the negative news.

Risk disclosure is generally less value-relevant than forward-looking disclosure in ASEAN countries and investors tend to react to the tone of risk disclosure more actively than the risk content dimensions. As risk disclosure generally brings uncertainty, investors perceive negative risk news as more credible than positive risk news. While positive risk information reduces investors' panic and irrational consciousness, negative risk information provides investors with unknown risks which increase their uncertainty and the range of their predictions. These findings are observed in the effect of risk disclosure tone on stock volatility and stock returns.

### **1.6. Contributions of the study**

This study contributes to the academic literature in the field of corporate disclosure, and to the growing empirical accounting literature on the association between ownership structure and corporate disclosure and the value relevance of corporate disclosure in the following ways:

Firstly, the disclosure scores obtained from the automated content analysis in this thesis provide an insight into the extent of corporate disclosure in the South-East Asian countries. This study complements the existing literature in examining the level of corporate disclosure and managers' incentives for disclosure. The study particularly investigates the disclosure of forward-

looking and risk information which is regarded as useful for investors in prior research (Hussainey et al., 2003; Beretta and Bozzolan, 2004; Li, 2006; Linsley and Shrivess, 2006; Abraham and Cox, 2007; Aljifri and Hussainey, 2007; Miihkinen, 2012; Elshandidy et al., 2013; Kent and Ung, 2013; Kravet and Muslu, 2013; Wang and Hussainey, 2013; Hope et al., 2016). To the best knowledge of the researcher, this is the first study conducting an automated content analysis of annual reports in the ASEAN countries and therefore contributes the knowledge about corporate disclosure practice in developing Asian economies. The disclosure scores in this study can be used as benchmarks for different types of information users such as regulators, investors, analysts in evaluating corporate disclosure practice in ASEAN countries.

Second, the study captures both quantity and quality of disclosure by considering the content dimensions and tone of disclosure as suggested in the existing literature (Hussainey et al., 2003; Beattie et al., 2004; Beretta and Bozzolan, 2004; Linsley and Shrivess, 2006; Bozzolan et al., 2009; Feldman et al., 2010; Schleifer and Walker, 2010; Price et al., 2012; Allee and Deangelis, 2015; Hassanein and Hussainey, 2015; Muslu et al., 2015; Henry and Leone, 2016). These attributes deepen the analysis of textual disclosure provided by ASEAN listed firms and enables the researcher to further examine the value relevance of disclosure to market participants.

Third, from a methodological viewpoint, the automated textual analysis applied in this thesis enables the analysis of a large sample size and thereby assists the comparison of corporate disclosure practice across countries. Moreover, the thesis contributes to the existing literature by providing a longitudinal study (over a nine-year study period) of the extent of corporate disclosure in the annual reports of ASEAN listed firms. This helps to discover the dynamics of corporate disclosure change. Together, given the generalisability of the sample, the disclosure measurement method applied in this study can be adopted in other disclosure studies that especially focus on annual report narratives.

Fourth, the results of this study have provided evidence on the applicability of theories originated from the developed market context to the ASEAN developing capital markets. A multi-theoretical approach is adopted to explain not only managers' incentives for disclosure but also owners' motivation to influence managers' propensity for disclosure. Ntim et al. (2012b) state that emerging economies are dealing with more profound socio-economic challenges than developed economies, giving rise to information asymmetry. In previous disclosure studies in emerging stock markets, it is suggested that the reasons for corporate engagement in voluntary disclosure are potentially diverse and conflicting (Ntim et al., 2013; Habtoor et al., 2019; Salem et al., 2019). This thesis therefore encourages the use of the proposed theoretical framework in explaining disclosure practices in other developing business contexts.

Fifth, this thesis contributes to the academic disclosure literature by providing new empirical evidence about the impact of ownership structure on the extent of corporate disclosure under the context of developing economies. While prior studies mainly focus on the level of ownership concentration, this study looks at ownership by identity including institutions, managers, foreign investors and the government, and thereby observes the role played by different types of shareholders in corporate disclosure decisions. Among those, the observed effects of government and foreign ownership are unique and more of interest in developing Asian economies, compared to Western developed economies.

Sixth, the thesis contributes to the empirical literature about the value relevance of forward-looking and risk information in ASEAN firms' annual reports. While corporate reporting can be provided in different forms in Western developed markets, ASEAN firms heavily rely on the annual report for public communication. The results on stock market implications of disclosure would be beneficial for ASEAN listed firms in improving the informativeness of the narrative sections of their annual reports. For current and future investors in the ASEAN stock markets, the results provide them with suggestions on what content and what qualitative dimension of disclosure they should analyse when reading the annual report. For

regulators, the findings are useful for setting out new policies or disclosure guidelines to improve the usefulness of corporate reporting and consequently enhance stock market efficiency. Finally, academics, researchers and analysts may make use of the findings to compare disclosure practice on a global scale and develop future research.

### **1.7. Structure of the thesis**

The remaining chapters of the thesis are structured as follows. Chapter 2 provides an overview of the institutional characteristics of ASEAN countries, including the history of the association, macroeconomic indicators, the development of stock markets, the regulatory framework and current situation of corporate reporting in the region. Chapter 3 provides a comprehensive literature review of disclosure-related theories and empirical findings in previous studies. The chapter discusses the current literature in both developed and developing stock markets, based on which it formulates hypotheses related to the ownership-disclosure association and the value relevance of disclosure to the stock market. Chapter 4 describes the research approach, research methods and techniques employed in this thesis to test the hypotheses developed in Chapter 3 and therefore provide the answers for the research questions specified in Chapter 1. Empirical findings about the effect of corporate ownership on the extent of forward-looking and risk disclosure are discussed in Chapter 5 and Chapter 6 respectively while empirical findings about the stock market implications of forward-looking and risk disclosure are discussed in Chapter 7. Finally, the summary of findings, conclusions, limitations, and recommendations for future research are set out in Chapter 8.



## **CHAPTER 2: THE CHARACTERISTICS AND CORPORATE REPORTING ENVIRONMENT IN ASEAN COUNTRIES**

### **2.1. Introduction**

This chapter provides an insight into the institutional settings of ASEAN countries which are chosen for the empirical analysis in this thesis. The chapter starts with an overview of the ASEAN's historical background, characteristics of country members and macro-economic indicators over period 2009 to 2017. In the second section, the chapter focuses on discussing the ownership of ASEAN listed firms by identity. As this study focuses on evaluating the effect of corporate ownership on disclosure levels, this section helps to better understand the situation of corporate ownership in ASEAN countries and consequently imply investors' motives in influencing corporate disclosure policies. The final section provides an insight into the regulatory framework for corporate reporting and the situation of corporate reporting practice in ASEAN countries during the study period.

### **2.2. Overview of the ASEAN**

#### **2.2.1. Historical background**

The Association of South-East Asian Nations (ASEAN) was established on 8<sup>th</sup> August 1967 in Bangkok, Thailand under the agreement of five founding members: Thailand, Singapore, Philippines, Indonesia and Malaysia. 17 years later, the association welcomed Brunei Darussalam (Brunei) as the sixth member, followed by the participation of Vietnam in 1995. In 1997, Laos and Myanmar successfully applied for the association's membership. The final member, Cambodia, joined the group in 1999 (ASEAN, 2017, p.3-5). East Timor (Timor-Leste) has applied to join ASEAN since 2011 but has not yet become an official member. The formation of the ASEAN aims at promoting a regional environment for economic growth, social progress, cross-border trade expansion and cultural development in the spirit of equality and partnership for prosperous and peaceful Southeast Asian Nations (ASEAN, 2017, p.1).

### **2.2.2. Regional economic liberalisation efforts**

Since established, the ASEAN played a trivial role in developing a regional community until the early 1990s, when increasing transnational crime, cross-border drug trafficking and other social development issues became a greater concern (Nesadurai, 2008). The situation urged ASEAN members to exert regional joint efforts to resolve social affairs. Moreover, at that time, the formation of the North America Free Trade Agreements (NAFTA) and the Single European Market potentially diverted FDI from the ASEAN (Menon, 1996). In 1992, the group members were committed to a new initiative to form ASEAN Free Trade Area (AFTA) over a 15-year period to expand international trade and promote FDI flows into the region. Accordingly, the project attempted to develop a single regional market to which member states were committed to progressively eliminate tariff barriers on agricultural products under the Common Effective Preferential Tariff (CEPT) Scheme. The project successfully reached the target of 0-5% tariff range five years earlier than initially planned.

After the 1997/98 Asian Financial Crisis, the association paid more attention to maintain regional economic stability through a collective mechanism (Tham and Basu Das, 2015). Moreover, increased global multilateral trading agreements put stronger pressure on the advancement of the group's economic integration (Kawai, 2005; Hew, 2007). In 2007, the ten South-East Asian nations agreed to implement a revitalizing initiative to develop an ASEAN Economic Community (AEC) by 2020 in three areas: politics and security, the economy and socio-culture. Once the community is successfully created, ASEAN members are expected to enjoy the free movement of goods, services, capital, FDI and skilled labour within an "ASEAN Single Window" (Petri et al., 2012; Tham and Basu Das, 2015).

The ASEAN has achieved significant progress by adopting the two initiatives. Following the elimination of tariff barriers, intra-regional trade noticeably grew from 20% to 25% by 2002 (Nesadurai, 2008). While tariffs have totally been eliminated in the ASEAN-6 since 2010, the poorer members including Vietnam, Myanmar, Laos, and Cambodia has lowered their intra-ASEAN tariffs from 7.3% in 2000 to 1.8% in 2013. As investors became more aware of the newly emerging Southeast Asian markets, there has been a gradual shift from intra-

regional to extra-regional trade. Regarding service industry, the region received roughly 25% of the world's net FDI inflows by 2016, compared to 6% in the early 1990s (Verico, 2017). Furthermore, according to a collaboration agreement with Asian Development Bank (ADB), the group also received \$US485.2 million to fund key infrastructure projects through a public-private partnership approach (Tham and Basu Das, 2015). That significantly supported low-income members to enhance their competitiveness.

However, the group has faced with several restraints for deeper economic integration. The five founding countries are more active in opening their markets thanks to the availability of favourable economic conditions whereas it takes extra time for the newer and poorer members to catch up to the planned schedule (Green, 2007). Second, the lack of readiness and preparation of country members, especially the low-income economies, make them reluctant to impose lower tariffs on some sensitive or less-competitive products (Nesadurai, 2008). They intend to give priority to the protection of domestic production rather than their commitments to regional liberalisation. Third, the ASEAN achieved limited progress on eliminating non-tariff barriers such as different national standards of product quality and complicated customs clearance procedures (Nesadurai, 2008; Tham and Basu Das, 2015). Fourth, a high level of government intervention prevented foreign investors from penetrating into this region. Nesadurai (2008) explains that the host governments play a key role in determining the rate of foreign ownership in domestic firms as well as the kind of incentives that foreign-owned firms might gain. The OECD (1993) argues that AFTA should be better interpreted as a hedge against increasing global economic integration rather than as a serious regional economic integration. Meanwhile, the AEC is more of a potential project which gathers a greater degree of country member willingness.

### **2.2.3. Macroeconomic indicators**

The ASEAN includes ten country members located in the Southeast Asia region, in the neighbouring area of China, Korea, Japan and Australia. According to the World Bank, as of 2017, the association has a population of around 591.23 million with a total area of 4.5 million square kilometres. It achieves an average annual GDP growth of 5.2% over the nine-year period

2009 to 2017, which is close to the East and Asia Pacific's average and well higher than the world average (Table 2.1, 2.2). This is an impressive achievement under the context of global economic fluctuations after the Global Financial Crisis 2007-2008. The association generally succeeds in keeping a low level of inflation and modestly reducing the unemployment rate. More importantly, the region has attracted increasing foreign investment into country members, becoming one of the "FDI-magnets" in the world. According to the ASEAN Investment Report 2018 published by UNCTAD, the FDI inflows in ASEAN country members together contributed only 5.8% of the world's GDP as of 2015 but increased significantly to 9.5% as of 2017. UNCTAD (2018) adds that investment prospects in the region are promising with significant improvements in investment environment, strong economic growth and accelerating regional integration. Investors from the US, Europe, and Japan explicitly show a strong desire to promote their trade and investment activities in the region. In the ASEAN Now Report 2017, the Australian government predicts that the region is poised to become the fourth largest economy in the world by 2030 and the Mekong region, including Cambodia, Laos and Vietnam will experience the fastest average GDP growth of 5.4% per annum.

**Table 2.1. Economic and demographic indicators of the ASEAN in 2009 and 2017**

| Country                  | Population (million) |              | GDP (\$US billion) |               | GDP per capita (\$US) |                 | Inflation-CPI (annual %) |             | Unemployment rate (% of total labour force) |             | FDI net inflows (%GDP) |             | Income group        |
|--------------------------|----------------------|--------------|--------------------|---------------|-----------------------|-----------------|--------------------------|-------------|---|-------------|------------------------|-------------|---------------------|
|                          | 2009                 | 2017         | 2009               | 2017          | 2009                  | 2017            | 2009                     | 2017        | 2009  | 2017        | 2009                   | 2017        |                     |
| Brunei Darussalam        | 0.39                 | 0.43         | 10.73              | 12.13         | 27497.0               | 28186.8         | 1.0%                     | -1.3%       | 6.5%  | 9.3%        | 3.0%                   | 3.9%        | High income         |
| Indonesia                | 240.98               | 264.49       | 539.58             | 1020.00       | 2239.1                | 3839.8          | 4.4%                     | 3.8%        | 6.1%  | 3.9%        | 0.9%                   | 2.0%        | Lower middle income |
| Malaysia                 | 28.22                | 31.98        | 202.26             | 319.11        | 7167.9                | 9979.8          | 0.6%                     | 3.9%        | 3.7%  | 3.4%        | 0.1%                   | 2.9%        | Upper middle income |
| Philippines              | 92.95                | 106.74       | 175.97             | 328.48        | 1893.3                | 3077.4          | 4.2%                     | 2.9%        | 3.9%  | 2.5%        | 1.2%                   | 3.1%        | Lower middle income |
| Singapore                | 4.99                 | 5.61         | 194.15             | 343.19        | 38927.2               | 61150.7         | 0.6%                     | 0.6%        | 5.9%  | 4.2%        | 12.1%                  | 28.9%       | High income         |
| Thailand                 | 67.81                | 70.90        | 281.71             | 456.36        | 4154.2                | 6436.8          | -0.8%                    | 0.7%        | 0.9%  | 0.8%        | 2.3%                   | 1.8%        | Lower middle income |
| <b>ASEAN-6's average</b> | <b>72.56</b>         | <b>80.03</b> | <b>234.07</b>      | <b>413.21</b> | <b>13646.45</b>       | <b>18778.55</b> | <b>1.7%</b>              | <b>1.8%</b> | <b>4.5%</b>                                 | <b>4.0%</b> | <b>3.3%</b>            | <b>7.1%</b> |                     |
| Cambodia                 | 14.16                | 15.83        | 10.40              | 22.18         | 734.8                 | 1400.9          | -1.2%                    | 2.9%        | 0.6%  | 0.1%        | 8.9%                   | 12.6%       | Lower middle income |
| Laos                     | 6.23                 | 6.99         | 5.84               | 17.07         | 936.8                 | 2439.5          | 0.1%                     | 0.8%        | 0.9%  | 0.8%        | 5.5%                   | 9.9%        | Lower middle income |
| Myanmar                  | 49.02                | 52.29        | 29.46              | 61.45         | 600.9                 | 1175.2          | 1.5%                     | 4.6%        | 0.7%  | 1.6%        | 3.7%                   | 7.8%        | Lower middle income |
| Vietnam                  | 86.48                | 94.03        | 106.01             | 281.35        | 1225.8                | 2992.1          | 6.7%                     | 3.5%        | 1.7%  | 1.9%        | 7.2%                   | 5.0%        | Lower middle income |
| <b>ASEAN-4's average</b> | <b>38.97</b>         | <b>42.29</b> | <b>37.93</b>       | <b>95.51</b>  | <b>874.58</b>         | <b>2001.93</b>  | <b>1.8%</b>              | <b>3.0%</b> | <b>1.0%</b>                                 | <b>1.1%</b> | <b>6.3%</b>            | <b>8.8%</b> |                     |

Source: World Bank database (<https://data.worldbank.org/>) [Accessed 5<sup>th</sup> February 2023].

**Table 2.2. Annual percentage GDP growth of the ASEAN over the period 2009 to 2017**

| Year                          | 2009       | 2010       | 2011       | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | Average     |
|-------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Brunei                        | -1.8       | 2.6        | 3.7        | 0.9        | -2.1       | -2.5       | -0.4       | -2.5       | 1.3        | <b>-0.1</b> |
| Cambodia                      | 0.1        | 6          | 7.1        | 7.3        | 7.4        | 7.1        | 7          | 6.9        | 7          | <b>6.2</b>  |
| Indonesia                     | 4.6        | 6.2        | 6.2        | 6          | 5.6        | 5          | 4.9        | 5          | 5.1        | <b>5.4</b>  |
| Laos                          | 7.5        | 8.5        | 8          | 8          | 8          | 7.6        | 7.3        | 7          | 6.9        | <b>7.6</b>  |
| Malaysia                      | -1.5       | 7.4        | 5.3        | 5.5        | 4.7        | 6          | 5.1        | 4.4        | 5.8        | <b>4.7</b>  |
| Myanmar                       | 10.4       | 10.1       | 7.5        | 6.5        | 7.9        | 8.2        | 3.3        | 10.5       | 5.8        | <b>7.8</b>  |
| Philippines                   | 1.4        | 7.3        | 3.9        | 6.9        | 6.8        | 6.3        | 6.3        | 7.1        | 6.9        | <b>5.9</b>  |
| Singapore                     | 0.1        | 14.5       | 6.2        | 4.4        | 4.8        | 3.9        | 3          | 3.6        | 4.7        | <b>5.0</b>  |
| Thailand                      | -0.7       | 7.5        | 0.8        | 7.2        | 2.7        | 1          | 3.1        | 3.4        | 4.2        | <b>3.2</b>  |
| Vietnam                       | 5.4        | 6.4        | 6.4        | 5.5        | 5.6        | 6.4        | 7          | 6.7        | 6.9        | <b>6.3</b>  |
| <b>Average</b>                | <b>2.6</b> | <b>7.7</b> | <b>5.5</b> | <b>5.8</b> | <b>5.1</b> | <b>4.9</b> | <b>4.7</b> | <b>5.2</b> | <b>5.5</b> | <b>5.2</b>  |
| World average                 | -1.3       | 4.5        | 3.3        | 2.7        | 2.8        | 3.1        | 3.1        | 2.8        | 3.4        | <b>2.7</b>  |
| East Asia & Pacific's average | 2.6        | 7.6        | 5.5        | 5.2        | 5.2        | 4.8        | 4.7        | 4.7        | 5.1        | <b>5.0</b>  |

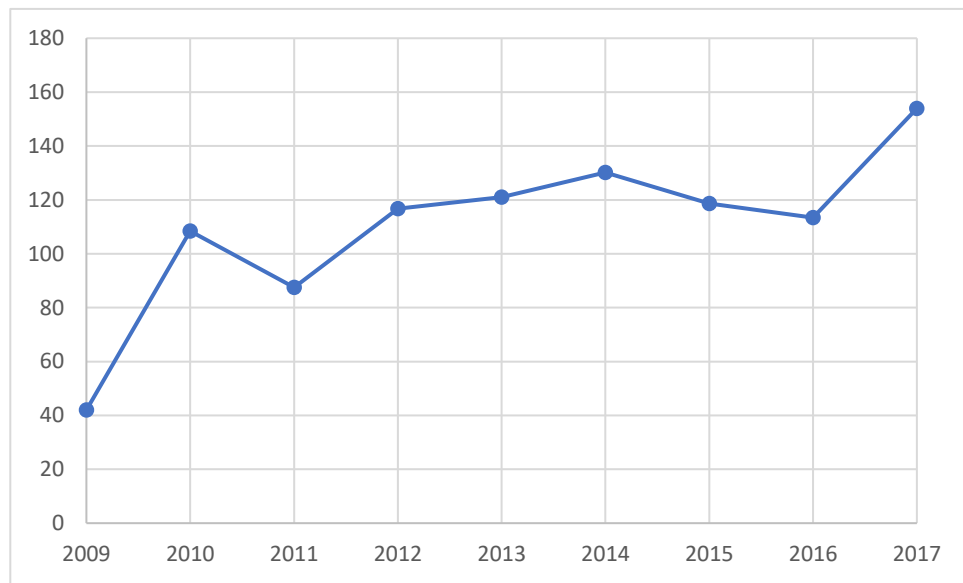
Source: World Bank database (<https://data.worldbank.org/>) [Accessed 5<sup>th</sup> February 2023].

According to Hill and Menon (2012), the most striking feature of the ASEAN region is its great diversity, which is probably greater than any other regional group in the world. For example, there are wide economic differences among country members (Schipke, 2015, p.3-4; Papageorgiou et al., 2015, p.59; Chowdhury et al., 2015, p.204-205). Brunei and Singapore are classified by World Bank as high-income nations. While Brunei mainly relies on ample oil reserves, Singapore is globally known as an industrialised economy. The two big commodity exporters in the region, Malaysia and Thailand, are in the upper middle-income group, and the remaining members are classified as lower middle-income countries. Most prior studies refer to a “development divide” into ASEAN-6, which includes the five founders and Brunei; and the ASEAN-4 (or CLMV) including Cambodia, Laos, Myanmar, and Vietnam (Green, 2007; Menon, 2013; Tham and Basu Das, 2015). Although the development gap has been narrowed since the association was established, the ASEAN-6’s average GDP per capita is still 9.4 times higher than that of the ASEAN-4 as end of 2017 (Table 2.1).

However, the ASEAN-4, recently experiences stronger economic growth than the ASEAN-6, ranging from 6% to 8% over the period 2009 to 2017 (Table 2.2). Except Myanmar, the ASEAN-4 economies will continue to stay strong in the post-Covid period with an average GDP growth of 5.4% annually, as forecast by the Australian Government (2017). This group also attracts increasing FDI flow from other parts of the world and intra-regional investors. Among them, Vietnam is making its way to the upper middle-income group (Table 2.1). The ASEAN-6 experiences a lower but more sustainable growth rate of around 3-4% annually. Most of group members are developing export-oriented manufacturing and restructuring their policy frameworks to boost economic growth.

Foreign direct investment is an important source for economic growth in ASEAN countries. The ASEAN governments’ efforts in attracting foreign investment have led to the rapid growth in FDI flows into the region. According to UNCTAD (2018), FDI in the region stands at just above \$US40 billion in 2009 and then increases sharply in the year 2010 to over \$US100 billion before climbing up to an all-time high level of \$US153.96 billion in 2017, which

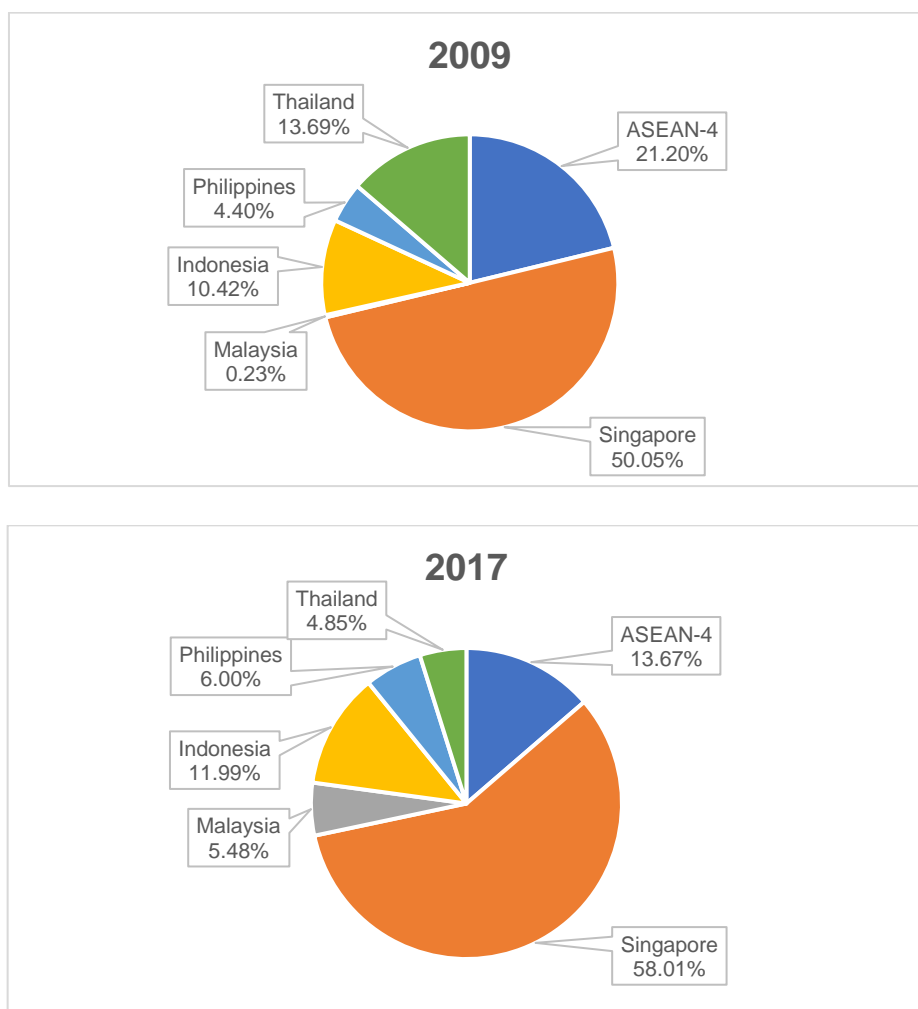
represents a 36% annual growth (Figure 2.1). The report also reveals that Singapore, Indonesia, and Vietnam are the top three largest recipients of FDI in the region with the combined FDI flow accounting for 72% of the ASEAN's total. However, compared to 2016, the FDI flow in 2017 steadily reaches more ASEAN countries such as Indonesia with a five-fold increase; Thailand with a three-fold increase and Philippines with a 21% growth.



Source: ASEAN Secretariat (Available from: <https://data.aseanstats.org/fdi-by-sources-and-sectors> [Accessed 5<sup>th</sup> February 2023]), ASEAN FDI database, OECD Equity Market Review of Asia 2018.

**Figure 2.1. FDI inflows of the ASEAN between 2009 and 2017**

Singapore stands out as the largest FDI recipient in the region, mainly from American and European investors, and a significant proportion of that investment is to the services industry. According to ASEAN FDI Database, Singapore occupies roughly 50% of the total ASEAN FDI inflows in 2009 and this slide increases to 58% in 2017 (Figure 2.2). While the FDI distribution among ASEAN country members does not significantly change over the period, the proportion of FDI to Thailand has slumped due to increased competition within the region in attracting foreign investment.



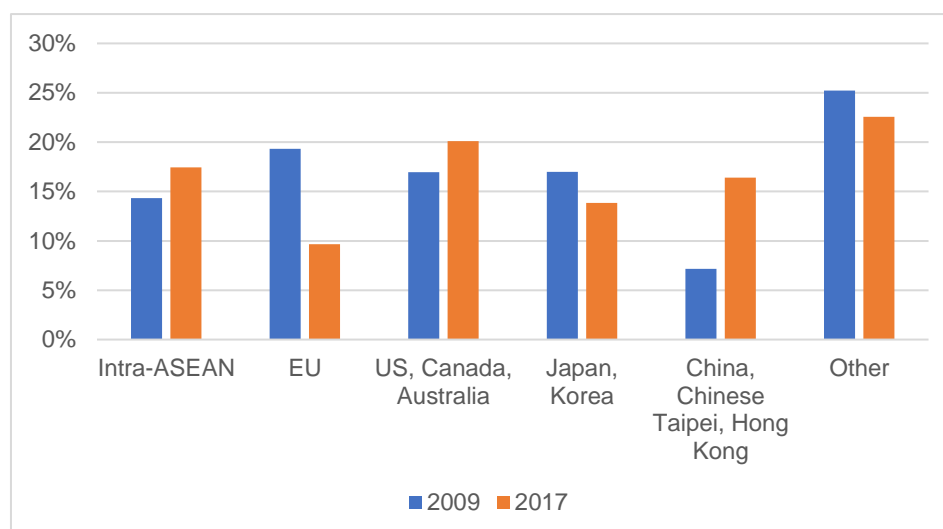
Note: The ASEAN-4 includes Cambodia, Laos, Myanmar, and Vietnam. Source: World Bank Open Data. Available from: <https://data.worldbank.org/> [Accessed 5<sup>th</sup> February 2023].

**Figure 2.2. FDI distribution within the ASEAN in 2009 and 2017**

By country origin, FDI from the US, Canada, and Australia accounts for the largest proportion which is closely followed by FDI from intra-ASEAN investors. According to OECD (2019), Singapore is the largest investor in other ASEAN country members with 19% of total inflows and 69% of the intra-regional flows as of 2017, followed by Malaysia and Thailand. These three countries together account for 95% of intra-regional investment. Indonesia is the largest recipient with 45% of intra-regional investment and this investment mainly comes from Singapore. Besides, the region receives roughly equal shares of FDI inflows from other origins. OECD (2019) reports that the total regional FDI inflows in 2017 is roughly equally attributed to developed economies in East Asia, Europe and North America and increasing investment is coming from Chinese Taipei, Hong Kong, and China (Figure 2.3). The diversity of FDI sources bring benefits to ASEAN country members in terms of diversified management expertise and



advanced technologies brought by foreign investors from developed economies.



Source: ASEAN Statistics Division, ASEAN Secretariat. Available from: <https://data.aseanstats.org/fdi-by-hosts-and-sources> [Accessed 5th February 2023].

**Figure 2.3. ASEAN FDI inflows by country of origin over the period 2009-2017**

#### **2.2.4. The origin of legal system and legal enforcement in ASEAN countries**

According to Watson (1975), legal rules in different countries stem from few legal families or traditions. La Porta et al. (1998) explain that commercial laws in the world can be grouped into two broad origins: common law, which derives from English laws, and civil law, which derives from Roman laws. Within the civil tradition, there are three branches: French, German, and Scandinavian. The two traditions have spread to many other parts of the world through imperialism and conquests. The regulatory frameworks in ASEAN country members are influenced by both legal traditions due to being colonised by the US, the UK, and other European countries in the past.

The regulatory background of ASEAN countries reflects the diversity of historical, cultural, and religious values in the region. In former British colonies, including Brunei, Malaysia and Singapore, there have no significant underlying changes in current effective laws which are mainly based on a common law system (Craig and Diga, 1996). Meanwhile, Myanmar was under the administration of the British-run state in India before its independence so its

legislation is affected by a mixed Anglo-Indian style. The legal systems in these four countries are predominantly common laws.

The remaining ASEAN countries can be classified as the civil law group. In Indonesia, the legal system is developed based on the co-existence of different regulatory regimes. Being colonized by Dutch for almost 350 years, the Indonesian regulatory system is primarily based on a civil-law Roman-Dutch system which, nevertheless, has been modified and developed to suit the dominance of Islam in this country (Perrera and Baydoun, 2007). Cambodia, Laos and Vietnam are previously known as French Indochina Pacific so French colonial rules are heavily embedded in their legal systems, implying a typical French civil tradition. The development of regulations in Vietnam is additionally influenced by the Chinese ideologies due to roughly 2,000 years under the administration of former Chinese dynasties (Doan and Nguyen, 2013). Unlike other ASEAN members, Thailand has never been colonised by another country. Its legislation is based on self-selection of legal practices in other developed countries, including the UK, Japan, and Germany. Despite being strongly influenced by common laws, Thailand can be categorised as a civil law country. Table 2.3 summarises the origin of legal systems in ASEAN countries.

According to La Porta et al. (1998), a common law system is more likely to prioritise the protection of investors' and creditors' rights and exhibit greater quality of enforcement than a civil law system. Moreover, among the branches of civil-law family, French civil law provides the weakest investor protection. When there is lack of legal protections, managers are more likely to pursue their self-interests rather than shareholders' interests in decision-making (Jensen and Meckling, 1976). La Porta et al. (1998) further point out that weak legal enforcement is closely related to high ownership concentration in French-civil-law countries as majority shareholders can opportunistically expropriate the wealth of minority shareholders. Given the diversity of legal origin among ASEAN countries, it can be expected that the common-law countries have better corporate governance quality than the civil-law countries. Additionally, the three countries under French colonial administration in the past, Cambodia, Laos and Vietnam, may have weaker regulatory frameworks than the other regional counterparts.

**Table 2.3. Legacy legal framework and economic model in ASEAN countries**

| Country     | Former colonial administrator | Year of independence | Legacy system                  | Economic model                   | Legal origin |
|-------------|-------------------------------|----------------------|--------------------------------|----------------------------------|--------------|
| Brunei      | British                       | 1984                 | British                        | State-run open economy           | Common law   |
| Cambodia    | French                        | 1953                 | French, Soviet Russian         | Socialist market economy         | Civil law    |
| Indonesia   | Roman-Dutch                   | 1945                 | Roman-Dutch Islamic            | State-run mixed economy          | Civil law    |
| Laos        | French                        | 1945                 | French, Soviet Russian         | Socialist market economy         | Civil law    |
| Malaysia    | British                       | 1957                 | British Islamic                | Capitalist market economy        | Common law   |
| Myanmar     | British, Indian               | 1948                 | British, Indian (Anglo-Indian) | Capitalist market economy        | Common law   |
| Philippines | Spanish, American             | 1946                 | Spanish, American              | Capitalist market economy        | Civil law    |
| Singapore   | British                       | 1965                 | British                        | Open market economy              | Common law   |
| Thailand    | None                          | N/A                  | British, Japanese, German      | Western-influenced mixed economy | Civil law    |
| Vietnam     | Chinese, French, American     | 1945                 | French, Soviet Russian         | Socialist market economy         | Civil law    |

Source: IASplus.com, IFRS.org [Accessed 16<sup>th</sup> July 2022].

Several world-wide governance databases show that there is a large gap in the quality of regulatory enforcement among ASEAN countries. The World Bank governance indicators for ASEAN countries as of 2020 in Table 2.4 show that the common-law countries, Malaysia, Singapore, and Brunei, outperform the civil law group in all dimensions of the assessment framework. Among them, Singapore has the highest quality of governance with the highest average score of 1.64. The governance quality in Cambodia, Laos and Myanmar is generally poor with an average score close to -1. While La Porta et al. (1998) suggest that strong legal enforcement can substitute for weak legal rules, the World

Bank governance scores show that regulatory quality and enforcement in most ASEAN civil-law countries are low. In all ASEAN countries, the dimension of Voice and Accountability has a negative value, implying limited freedom of speech among citizens and in media sector. This is in line with La Porta et al. (1999) that civil law countries are associated with government interventionism and the prevalence of corruption.

**Table 2.4. Governance indicators of ASEAN countries as end of 2017**

| Country                                     | Brunei      | Cambodia    | Indonesia   | Laos        | Malaysia    |
|---|-------------|-------------|-------------|-------------|-------------|
| Control of corruption                       | 0.7         | -1.3        | -0.3        | -0.9        | 0           |
| Government effectiveness                    | 1.1         | -0.7        | 0           | -0.4        | 0.8         |
| Political stability and Absence of violence | 1.2         | 0.1         | -0.5        | 0.4         | 0.1         |
| Regulatory quality                          | 0.7         | -0.5        | 0           | -0.7        | 0.7         |
| Rule of law                                 | 0.6         | -1.1        | -0.3        | -0.9        | 0.4         |
| Voice and accountability                    | -0.9        | -1.2        | 0.1         | -1.8        | -0.4        |
| <b>Average</b>                              | <b>0.6</b>  | <b>-0.8</b> | <b>-0.2</b> | <b>-0.7</b> | <b>0.3</b>  |
| Country                                     | Myanmar     | Philippines | Singapore   | Thailand    | Vietnam     |
| Control of corruption                       | -0.6        | -0.5        | 2.1         | -0.4        | -0.6        |
| Government effectiveness                    | -1.1        | 0           | 2.2         | 0.3         | 0           |
| Political stability and Absence of violence | -1.1        | -1.2        | 1.6         | -0.8        | 0.2         |
| Regulatory quality                          | -0.8        | 0.1         | 2.1         | 0           | -0.4        |
| Rule of law                                 | -0.9        | -0.5        | 1.8         | 0           | 0.1         |
| Voice and accountability                    | -0.9        | 0.1         | -0.2        | -1          | -1.4        |
| <b>Average</b>                              | <b>-0.9</b> | <b>-0.3</b> | <b>1.6</b>  | <b>-0.3</b> | <b>-0.4</b> |

Note: These scores are estimated in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5. *Control of Corruption* captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests; *Political Stability and Absence of Violence/Terrorism* measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism; *Government Effectiveness* captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; *Regulatory Quality* captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development; *Rule of Law* captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence; *Voice and Accountability* captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Source: Worldwide Governance Indicators, World Bank Database, <https://databank.worldbank.org/source/worldwide-governance-indicators> [Accessed 5<sup>th</sup> February 2023].

According to the United Nations, the rule of law refers to the accountability, fairness, and equality in the application of laws across all persons, institutions, entities, including the government<sup>1</sup>. The rule of law index calculated by the World Justice Project provides another scale on the accountability and enforcement of laws in ASEAN countries (Table 2.5). It is consistent with the World Bank governance indicators that ASEAN countries are at different levels

<sup>1</sup> The United Nations' definition the rule of law is explained at <https://www.un.org/ruleoflaw/what-is-the-rule-of-law/>

of regulatory development. Singapore is among the world leading countries with the highest average score and the highest scores in all criteria. Among the other ASEAN countries, Malaysia and Indonesia have relatively better governance systems than the remaining country members. The legal systems in Cambodia and Myanmar are among the weakest in the world. According to La Porta et al. (1998, 2000), weak governance systems are associated with severe agency problems between managers and shareholders. The rule of law scores also indicate that, compared to other regions, the government has greater power in drafting and enforcing laws in ASEAN countries while there are limited measures to oversight the government’s exercise of authority and promote the sharing of regulatory data to the public.

**Table 2.5. Rule of law index of ASEAN countries as end of 2017**

| <b>Score and ranking</b>        | <b>Cambodia</b> | <b>Indonesia</b> | <b>Malaysia</b> | <b>Myanmar</b> | <b>Philippines</b> | <b>Singapore</b> | <b>Thailand</b> | <b>Vietnam</b> |
|---------------------------------|-----------------|------------------|-----------------|----------------|--------------------|------------------|-----------------|----------------|
| Global score                    | 0.32            | 0.52             | 0.54            | 0.42           | 0.47               | 0.8              | 0.5             | 0.5            |
| Global ranking                  | 112/113         | 63/113           | 53/113          | 100/113        | 88/113             | 13/113           | 71/113          | 74/113         |
| Asia Pacific regional ranking   | 15/15           | 9/15             | 8/15            | 14/15          | 13/15              | 3/15             | 10/15           | 11/15          |
| <b>Scoring criteria</b>         |                 |                  |                 |                |                    |                  |                 |                |
| Constraints on government power | 0.32            | 0.64             | 0.49            | 0.46           | 0.55               | 0.7              | 0.47            | 0.46           |
| Absence of corruption           | 0.25            | 0.37             | 0.56            | 0.47           | 0.47               | 0.91             | 0.49            | 0.44           |
| Open government                 | 0.23            | 0.54             | 0.39            | 0.32           | 0.52               | 0.65             | 0.48            | 0.44           |
| Fundamental rights              | 0.31            | 0.51             | 0.47            | 0.31           | 0.42               | 0.7              | 0.47            | 0.5            |
| Order and security              | 0.51            | 0.74             | 0.77            | 0.7            | 0.51               | 0.93             | 0.69            | 0.77           |
| Regulatory enforcement          | 0.27            | 0.53             | 0.5             | 0.46           | 0.51               | 0.87             | 0.5             | 0.45           |
| Civil justice                   | 0.2             | 0.45             | 0.56            | 0.37           | 0.47               | 0.8              | 0.53            | 0.44           |
| Criminal justice                | 0.27            | 0.35             | 0.55            | 0.29           | 0.31               | 0.81             | 0.4             | 0.49           |

Note: Brunei Darusallam and Laos are not included in the assessment. Source: World Justice Project 2021 <https://worldjusticeproject.org/rule-of-law-index/global/2017-18/Criminal%20Justice/> [Accessed 5<sup>th</sup> February 2023].

Corruption is more severe in developing countries than in developed markets (Shan et al., 2015; Brusca et al., 2018). The weak accountability of government in ASEAN countries can be the root cause behind high corruption in the region. A majority of ASEAN countries are developing nations and are ranked in the bottom half of the Corruption Perceptions Index developed by Transparency International. Table 2.6 shows that many ASEAN countries are highly corrupt, except Singapore and Malaysia, and this situation does not significantly change over the period 2009 to 2017. Some ASEAN countries are the most corrupt nations in the world and the governments exhibit low political will in tackling the

issue. Corruption hinders economic growth by misallocation of resources, poor corporate operational productivity and efficiency, leading to increased costs and uncertainty in business activities (International Monetary Fund, 1998; United Nations, 2004). Under a seriously corrupt environment, firms are more likely to engage in corrupt practices to obtain business deals or proceed contractual agreements and managers have more incentives to disguise or manipulate accounting information (Quah, 2020). ASEAN firms are faced with increasing pressures from shareholders and various powerful stakeholder groups so they are in the transitional stage to pursue transparency and sustainability to fuel future growth (Sari et al., 2021).

**Table 2.6. Corruption perceptions index of ASEAN countries over the period 2009 to 2017**

| Year | Cambodia |      | Indonesia |      | Laos  |      | Malaysia |      | Myanmar |      | Philippines |      | Singapore |      | Thailand |      | Vietnam |      | Number of countries assessed |
|------|----------|------|-----------|------|-------|------|----------|------|---------|------|-------------|------|-----------|------|----------|------|---------|------|------------------------------|
|      | Score    | Rank | Score     | Rank | Score | Rank | Score    | Rank | Score   | Rank | Score       | Rank | Score     | Rank | Score    | Rank | Score   | Rank |                              |
| 2009 | 2        | 158  | 2.8       | 111  | 2     | 158  | 4.5      | 56   | 1.4     | 178  | 2.4         | 139  | 9.2       | 3    | 3.4      | 84   | 2.7     | 120  | 180                          |
| 2010 | 2.1      | 154  | 2.8       | 116  | 2.1   | 154  | 4.4      | 59   | 1.4     | 176  | 2.4         | 146  | 9.3       | 1    | 3.5      | 87   | 2.7     | 127  | 178                          |
| 2011 | 2.1      | 164  | 3         | 100  | 2.2   | 154  | 4.3      | 60   | 1.5     | 180  | 2.6         | 129  | 9.2       | 5    | 3.4      | 80   | 2.9     | 112  | 183                          |
| 2012 | 22       | 157  | 32        | 118  | 21    | 160  | 49       | 54   | 15      | 172  | 34          | 105  | 87        | 5    | 37       | 88   | 31      | 123  | 176                          |
| 2013 | 20       | 160  | 32        | 114  | 26    | 140  | 50       | 53   | 21      | 157  | 36          | 94   | 86        | 5    | 35       | 102  | 31      | 116  | 177                          |
| 2014 | 21       | 156  | 34        | 107  | 25    | 145  | 52       | 51   | 21      | 156  | 38          | 85   | 84        | 7    | 38       | 85   | 31      | 119  | 175                          |
| 2015 | 21       | 150  | 36        | 88   | 25    | 139  | 50       | 54   | 22      | 147  | 35          | 95   | 85        | 7    | 38       | 76   | 31      | 111  | 167                          |
| 2016 | 21       | 156  | 37        | 90   | 30    | 123  | 49       | 55   | 28      | 136  | 35          | 101  | 84        | 7    | 35       | 101  | 33      | 113  | 176                          |
| 2017 | 21       | 161  | 37        | 96   | 29    | 135  | 47       | 62   | 30      | 130  | 34          | 111  | 84        | 6    | 37       | 96   | 35      | 107  | 180                          |

Note: The Corruption Perception Index ranks 180 countries and territories around the world by their perceived levels of public sector corruption. The results are given on a scale of 0 (highly corrupt) to 100 (very clean). Source: Transparency International, <https://www.transparency.org/> [Accessed 5<sup>th</sup> February 2023]

## **2.3. The development of ASEAN capital markets**

### **2.3.1. The development of equity markets**

Overall, businesses in ASEAN countries heavily rely on the banking system to finance their activities. Bank loan is the mere source of corporate financing in low-income countries such as Laos, Cambodia, and Myanmar while it remains as the dominant source of debt financing in Malaysia (Tam and Tan, 2007). Chaisrisawatsuk (2016) states that underdeveloped economies are more likely to depend on the banking sector than on equity or bond markets for financial services. The dominance of banks in ASEAN countries is the primary source of financial risk in this region, making these economies highly vulnerable to external credit shocks. The Asian Financial Crisis 1997-1998 has exploded due to the poor performance and lack of supervision in commercial banks (Mohanty and Tuner, 2010; Shimizu, 2014).

Since 1997, ASEAN firms pay more attention to alternative sources of finance to diversify their financing structures. They look for other ways of raising debts outside the banking system, implying a potential for the development of securities markets in this region. The founding members have their stock markets established well before the ASEAN-4 group. The statistics of ASEAN equity markets in Table 2.7 show that Singapore, as one of Asian financial hubs, has the largest value of market capitalisation in the region over the study period with \$US481.2 billion in 2009 and nearly \$US787.3 billion in 2017 which was as twice as its total GDP of \$US343.19 billion in the same year. This figure is followed by Indonesia with roughly \$US520.7 billion and Thailand with roughly \$US548.8 billion in 2017. While market capitalisation in Malaysia stock market ranks second in the region from 2009 to 2014, it has been overcome by Thailand and Indonesia since 2015 and stands at approximately \$US455.8 billion in 2017 which is still higher than the total GDP in the same year. In Philippines and Vietnam, companies remain highly dependent on bank credits although their equity markets have gradually expanded. Equity market capitalisation in these two countries is just above \$US290 billion and \$US116 billion respectively, equalling their total GDP in 2017. Stock exchanges in Laos, Cambodia and Myanmar remain meagre, on which only large banks, public sector groups and investment funds have their shares traded. While corporate



bond markets in the ASEAN-6 are well smaller than equity markets, no bond market has emerged in the ASEAN-4 (Table 2.8). The bond market in Singapore has grown rapidly over the nine-year period, especially in the year 2017 with approximately \$US370 billion capital raised. Derivative instruments are also only available in Singapore as the market is highly developed and liquid.

**Table 2.7. Number of listed companies and market capitalisation in ASEAN equity markets in \$US million over the period 2009 to 2017**

|   | 2009             | 2010             | 2011             | 2012             | 2013             | 2014             | 2015             | 2016             | 2017             |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Equity Market - Market Capitalisation</b>              | <b>1,275,239</b> | <b>1,881,471</b> | <b>1,839,133</b> | <b>2,278,961</b> | <b>2,203,223</b> | <b>2,372,297</b> | <b>2,015,698</b> | <b>2,190,704</b> | <b>2,719,635</b> |
| Bursa Malaysia  | 289,219          | 408,689          | 395,624          | 466,588          | 500,387          | 459,004          | 382,977          | 363,150          | 455,772          |
| Hochiminh Stock Exchange (Vietnam)                              | 26,526           | 30,115           | 21,574           | 3. 2,053         | 40,061           | 46,067           | 51,877           | 67,080           | 116,657          |
| Indonesia Stock Exchange  | 214,941          | 360,388          | 390,107          | 428,223          | 346,674          | 422,127          | 353,271          | 433,822          | 520,687          |
| Philippines Stock Exchange                                      | 86,349           | 157,321          | 165,066          | 229,317          | 217,320          | 261,841          | 238,820          | 239,882          | 290,469          |
| Singapore Exchange  | 481,247          | 647,226          | 598,273          | 765,078          | 744,413          | 752,831          | 639,956          | 649,456          | 787,255          |
| Stock exchange of Thailand                                      | 176,956          | 277,732          | 268,489          | 389,756          | 354,367          | 430,427          | 348,798          | 437,314          | 548,795          |
| <b>Total Equity Market - Number of listed companies (Total)</b> | <b>3,109</b>     | <b>3,223</b>     | <b>3,252</b>     | <b>3,275</b>     | <b>3,311</b>     | <b>3,367</b>     | <b>3,403</b>     | <b>3,438</b>     | <b>3,519</b>     |
| Bursa Malaysia  | 959              | 956              | 940              | 920              | 910              | 905              | 902              | 903              | 904              |
| Hochiminh Stock Exchange (Vietnam)                              | 196              | 275              | 301              | 308              | 301              | 305              | 307              | 320              | 344              |
| Indonesia Stock Exchange  | 398              | 420              | 440              | 459              | 483              | 506              | 521              | 537              | 566              |
| Philippines Stock Exchange                                      | 248              | 253              | 253              | 254              | 257              | 263              | 265              | 265              | 267              |
| Singapore Exchange  | 773              | 778              | 773              | 776              | 776              | 775              | 769              | 757              | 750              |
| Stock Exchange of Thailand                                      | 535              | 541              | 545              | 558              | 584              | 613              | 639              | 656              | 688              |

Source: World Federation of Exchanges Statistics, <https://statistics.world-exchanges.org> [Accessed 16<sup>th</sup> July 2022].

**Table 2.8. Number of listed bonds and market capitalisation in ASEAN stock exchanges in \$US million over the period 2009 to 2017**

|                                       | 2009           | 2010           | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017           |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Bonds - Number listed (Total)</b>  | <b>1,773</b>   | <b>1,793</b>   | <b>1,800</b>   | <b>1,990</b>   | <b>72,295</b>  | <b>2,479</b>   | <b>2,488</b>   | <b>2,534</b>   | <b>3,209</b>   |
| Bursa Malaysia                        | 41             | 36             | 33             | 27             | 23             | 30             | 26             | 27             | 24             |
| Hochiminh Stock Exchange (Vietnam)    |                |                |                |                | 70,092         | 38             | 39             | 35             | 39             |
| Singapore Exchange                    | 1,021          | 1,084          | 1,134          | 1,317          | 1,552          | 1,842          | 1,930          | 2,039          | 2,765          |
| Stock Exchange of Thailand            | 711            | 673            | 633            | 646            | 628            | 569            | 493            | 433            | 381            |
| <b>Bonds - Capital raised (Total)</b> | <b>285,495</b> | <b>138,853</b> | <b>273,864</b> | <b>196,753</b> | <b>179,818</b> | <b>166,006</b> | <b>122,968</b> | <b>179,333</b> | <b>379,366</b> |
| Bursa Malaysia                        | 0              | 36             | 0              | 257            | 135            | 133            | 0              | 112            | 0              |
| Indonesia Stock Exchange              | 6,469          | 8,418          | 23,055         | 27,695         | 26,728         | 0              | 0              |                |                |
| Singapore Exchange                    | 182,226        | 102,072        | 238,715        | 150,286        | 139,695        | 160,478        | 114,938        | 169,839        | 371,155        |
| Stock Exchange of Thailand            | 96,799         | 28,327         | 12,094         | 18,516         | 13,260         | 5,395          | 8,029          | 9,381          | 8,211          |

Source: World Federation of Exchanges Statistics, <https://statistics.world-exchanges.org> [Accessed 16<sup>th</sup> July 2022]

At a macro-economic level, ASEAN governments impose financial constraints on banks, credit institutions and foreign investors, hindering proper functions of capital markets. Ameer (2013; 2014) specify that the governments usually place restrictions on price movements and credit allocation through the control of prices and quantities. Foreign investors have not been equally treated as domestic market participants in terms of the percentage of shares held and types of available incentives. Overall, the lack of trust on the legal efficacy among market participants makes it difficult for well-developed regulations to become effective in practice (Oehmichen, 2018). To overcome these obstacles, ASEAN countries are currently at various stages of restructuring their capital markets (Gochoco-Bautista and Remolona, 2012). While the poorer countries focus on developing the underlying infrastructure for equity markets to reduce their overdependence on banks, the founding country members aim at deepening their financial markets and improve the capital market liquidity.

### **2.3.2. Stock exchanges in ASEAN countries**

While stock exchanges in the US, Europe and developed Asian economies are mainly formed through the consolidation of traditional stock exchanges or becoming part of a stock exchange group, those in emerging Asian markets are mainly consolidated at the national level (OECD, 2018). Moreover, many stock exchanges in developed markets are public companies with their shares listed on one of their own exchanges. The emergence of trading venues also allows trading through non-exchange platforms in the US and Europe. This phenomenon is less common in the ASEAN.

Table 2.9 presents brief information about stock exchanges in ASEAN countries. According to OECD (2017), ASEAN stock exchanges are not homogenous in terms of ownership and administration. Stock trading in this region generally relies on a single stock exchange which is either previously or currently controlled by the government. The transformation of stock exchanges into listed companies has been taken place in Malaysia, Singapore, and Philippines. Meanwhile, the Indonesia stock exchange remains as a private company which is formed through the consolidation of two stock exchanges. Stock exchanges in Thailand and Vietnam are still under government control. Unlike other ASEAN stock exchanges, Singapore stock exchange is originally

formed as a holding company in 1999, which gradually acquires ownership of stock exchanges in other countries such as India, Japan, Philippines, and the Baltics. The discussion in Section 2.3.1 has shown that the size of stock exchange is varying across ASEAN countries (Table 2.7). In the underdeveloped ASEAN stock markets, such as Philippines, Indonesia and Vietnam, OECD (2018) reports relatively lower market turnover and stock liquidity than other Asian countries.

**Table 2.9. Stock exchanges in the ASEAN**

| Country     | Stock exchange             | Legal status        | Self-listing |
|-------------|----------------------------|---------------------|--------------|
| Indonesia   | Indonesia Stock Exchange   | Private company     | No           |
| Malaysia    | Bursa Malaysia             | Joint Stock Company | Yes          |
| Philippines | Philippines Stock Exchange | Joint Stock Company | Yes          |
| Singapore   | Singapore exchange         | Joint Stock Company | Yes          |
| Thailand    | Stock exchange of Thailand | State-owned         | No           |
| Vietnam     | Hochiminh Stock Exchange   | State-owned         | No           |
|             | Hanoi Stock Exchange       |                     |              |

Source: World Federation of Exchanges (<https://www.world-exchanges.org/>) and stock exchanges website [Accessed 16<sup>th</sup> July 2022].

## **2.4. Corporate ownership in ASEAN countries**

### **2.4.1. An overview of corporate ownership in ASEAN countries**

ASEAN economies are characterised by the prevalence of family shareholding and state control, leading to a highly concentrated ownership structure with typically one dominant owner (Cheung et al., 2011; Yaacob and Basiuni, 2014). According to the most recent OECD (2019), corporate ownership in Indonesian corporations is most concentrated with an average of 70% of total capital held by top three largest shareholders. The figures for Philippines, Singapore and Malaysia are 66%, 64% and 61% respectively. By identity of ownership, corporations, normally family groups, and the government are dominant owners.

Table 2.10 reports that government ownership in Malaysia is the highest in the region with an average of 42%, followed by Vietnam and Thailand with 30% and 21% respectively. The ASEAN governments traditionally hold a large share

in energy, telecommunications, and utilities sectors (OECD, 2019, p.45). In Singapore and Philippines, corporate ownership is more in the hands of institutional and individual investors than the government. In contrast with developed economies, institutional ownership is less common in ASEAN countries and a majority of that is attributed to foreign institutions. While the value of total assets held by institutions in most ASEAN country members is small, funded, and private pension plans is relatively high in Singapore at 80% of GDP but they make minor investment in equity markets. Remarkably, OECD (2019, p.47) reveals that 93% of all institutional ownership in Philippines belongs to foreign institutions. Among the other ASEAN markets, over two-thirds of the institutional ownership are non-domestic, except Vietnam with the lowest institutional ownership level of only 6%. OECD (2019) concludes that strong presence of group structures, pyramidal ownership and cross-holdings are significant ownership features of these economies. Under these circumstances, the conflict of interest between majority and minority shareholders tends to be more severe (Cheung et al., 2011; Oehmichen, 2018).

**Table 2.10. Ownership of largest companies in ASEAN countries by category of owners as end of 2017**

| Country             | Governments | Institutional investors | Individuals |
|---------------------|-------------|-------------------------|-------------|
| Indonesia           | 20%         | 11%                     | 11%         |
| Malaysia            | 42%         | 12%                     | 6%          |
| Philippines         | 2%          | 10%                     | 19%         |
| Singapore           | 13%         | 13%                     | 9%          |
| Thailand            | 21%         | 13%                     | 14%         |
| Vietnam             | 30%         | 6%                      | 10%         |
| <b>Asia average</b> | <b>21%</b>  | <b>11%</b>              | <b>12%</b>  |
| UK                  | 6%          | 60%                     | 2%          |
| US                  | 2%          | 68%                     | 3%          |

Source: OECD Equity Market Review – Asia 2018, based on ownership data from the 100 largest listed companies in each market, as percentage of total capital.

Concerning foreign ownership, De La Cruz et al. (2019) reveal that around 30% of public equity investments is made by foreign investors in the region. Although this figure is lower than other markets such as Netherlands, the UK, Brazil and Pakistan, it still represents a significant level of shareholding. While institutions such as investment funds, pension funds, and insurance companies are the main foreign owners of listed companies in the US (72%), the UK (60%),

Europe (38%) and other advanced markets (39%), foreign equity ownership in the ASEAN is more attributed to private corporations and holding companies which hold more than 40% of listed companies in Philippines and Indonesia and roughly 20% in other ASEAN markets.

#### **2.4.2. Government ownership**

While government ownership is negligible in market-oriented Western economies, this type of ownership is dominant in developing countries (La Porta et al., 1999; Claessens et al., 2000). In ASEAN countries, the dominance of government ownership is more pronounced as the result of the government's key role in developing the economy after independence. A majority of ASEAN countries are colonies of the US or European countries since early 1900s and become independent since the mid-19<sup>th</sup> century. In early years of independence, the young economies rely on SOEs to develop primary industries. However, after few decades of independence, these businesses fail to meet the demand of rapid economic development due to their poor performance and inefficient management (Astami et al., 2010; Musallam and Muniandy, 2017; Tu and Nguyen, 2021). ASEAN governments start divesting their capital in SOEs by selling ownership to private investors. The purpose of the privatisation of SOEs is to enhance business management and competitiveness in SOEs; thereby, improve their financial performance.

Although privatisation of SOEs has been undertaken in ASEAN countries since the late 1980s, this process accelerates after the 1997/1998 financial crisis and is currently on-going. In partially privatised firms, the government still keeps a controlling stake which allows the implementation of both socioeconomic and political goals. According to OECD (2014), the ASEAN governments hold a considerable share in core sectors such as utilities and energy sectors (Vietnam, Thailand, Philippines) or in capital-intensive sectors such as telecommunications and heavy metal extraction (Singapore, Indonesia, Malaysia). In Indonesia, Astami et al. (2010) report that there are 157 very large SOEs spread over most business sectors after nearly two decades of privatisation. In Vietnam, Tu and Nguyen (2021) reveal that 30% of Vietnamese listed firms on two main stock exchanges have at least 50% of government shares over the period 2009 to 2015 while Choi et al. (2020) find that state

ownership in Vietnamese listed firms remain high at an average of 21.2% over the period 2012 to 2017.

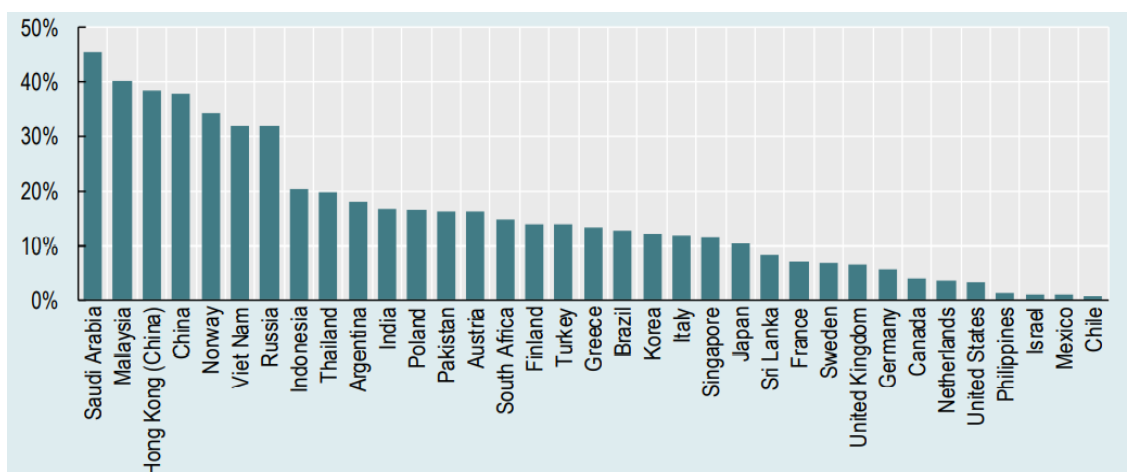
Table 2.11 shows more statistics of government ownership in the region provided in OECD Equity Market Review of Asia 2018. It is shown that, as end of 2017, the government is the controlling shareholder in more than one fifth of 100 largest companies in Indonesia and Vietnam while it holds around 40% ownership in 32 largest companies in Malaysia and in 22 largest companies in Singapore. Figure 2.4 further indicates that the average government ownership in Malaysia, Vietnam, Indonesia, and Thailand is well higher than other Asian advanced markets and Western economies and the majority of such ownership is domestic (OECD, 2019). OECD (2018) suggests that the partial privatisation through public equity market listings does not make a real change in the government control in ASEAN capital markets. This process rather leads to a growing presence of government ownership in these countries. Caney and Hamilton-Hard (2015) provide supporting evidence that government ownership in Indonesia increases over the period 2008 to 2014 despite a reduction in the total number of SOEs. The study describes this phenomenon as the result of consolidation rather than divestment, meaning that SOEs are merged to form fewer but much larger companies which hold an increasing value of assets in the economy.

**Table 2.11. The largest shareholder by category of owners in ASEAN countries as end of 2017**

| Country     | Government | Individual | Institution |
|-------------|------------|------------|-------------|
| Indonesia   | 22 (62%)   | 11 (47%)   | -           |
| Malaysia    | 32 (42%)   | 13 (41%)   | -           |
| Philippines | 1 (32%)    | 19 (54%)   | 1 (10%)     |
| Singapore   | 22 (40%)   | 24 (46%)   | 3 (24%)     |
| Thailand    | 15 (44%)   | 33 (28%)   | 3 (6%)      |
| Vietnam     | 25 (51%)   | 25 (35%)   | 8 (9%)      |

Note: The value in the columns represents the number of companies where the category of investor is the largest holder and the percentage in parenthesis represents the average ownership of the largest shareholder. Source: OECD Equity Market Review – Asia 2018.





Source: The report “Owners of the World’s Listed Companies” in OECD Capital Market Series prepared by De La Cruz, A., A. Medina and Y. Tang in 2019 for 54 equity markets worldwide. Available from: [www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm](http://www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm) [Accessed 16<sup>th</sup> July 2022].

**Figure 2.4. Public sector ownership in world capital markets as end of 2017**

In Malaysia and Singapore, SOEs exhibit a more active entrepreneurial role in promoting a healthy business environment. The discussions in Section 2.3.1 and 2.3.2 have shown that these two countries distinguish themselves from the other ASEAN countries by a higher level of GDP per capital and more developed stock markets. Since early 1970s, the Malaysian government makes strong efforts on attracting foreign investment through new regulations and policies such as the New Economic Policy 1971, the Industrial Coordination Act 1991, and the New Economic Model 2010 (Tam and Tan, 2007). The legal framework is built on the cooperation between the public and private sectors to fuel economic development (Ismail and Sinnadurai, 2012). Meanwhile, high government ownership in Singapore is explained as the result of the governments’ efforts on leading the economy towards industrialisation since the 1960s (Ang and Ding, 2006). Through a holding company, the Singapore government exercises its control rights to monitor and participate as board members to promote stewardship of decision-making. Compared to firms without government ownership, Ang and Ding (2006) provide empirical evidence that government-linked companies in Singapore exhibit higher market valuations and provide superior returns thanks to better management of expenses. These firms also exhibit greater compliance to corporate governance standards.

Nevertheless, financial performance of firms with government ownership in developing ASEAN countries remains low. Government ownership is widely

criticised as being associated with soft budget constraints which reduce the efficacy of investment decisions (Tu and Nguyen, 2021). According to OECD (2018), government ownership is nearly two-fold in low-performing ASEAN firms (Table 2.12). Several empirical studies provide evidence on the negative impact of government ownership on firm performance in Indonesia (Astami et al., 2010) and Malaysia (Musallam, 2015). Musallam and Muniandy (2017) explain that the pursuit of non-economic targets government-owned firms may lead to higher agency conflicts faced by other shareholders. Another striking feature of state-owned firms in Indonesia and Malaysia is their strong reliance on debt finance, implying high financing risk (Table 2.10).

**Table 2.12. Government ownership in ASEAN countries categorised by performance and leverage as end of 2017**

| Government ownership | Average 5-year leverage |                       |            | Average 5-year return on investment |                       |            |
|----------------------|-------------------------|-----------------------|------------|-------------------------------------|-----------------------|------------|
|                      | Higher than the median  | Lower than the median | Difference | Higher than the median              | Lower than the median | Difference |
| Indonesia            | 30%                     | 18%                   | 12%        | 14%                                 | 30%                   | -16%       |
| Malaysia             | 33%                     | 26%                   | 7%         | 21%                                 | 36%                   | -15%       |
| Thailand             | 13%                     | 14%                   | -1%        | 8%                                  | 17%                   | -9%        |
| Vietnam              | 33%                     | 36%                   | -4%        | 29%                                 | 38%                   | -9%        |

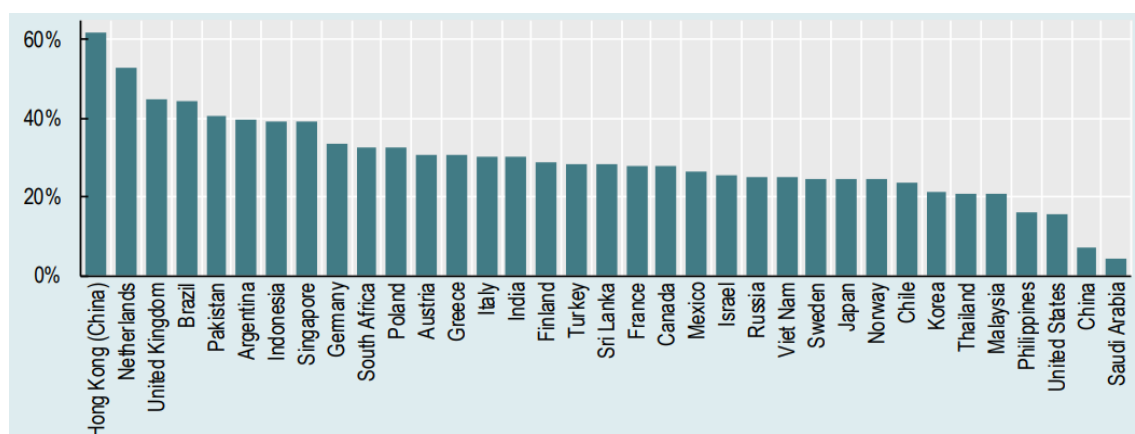
Source: OECD Equity Market Review – Asia 2018

To sum up, government control is a striking feature of ASEAN economies. Although the privatisation of SOEs has been carrying out for decades, government ownership remains high in core business sectors. Statistics and empirical studies reveal that government-owned firms in ASEAN countries generally have low performance and weak governance. Socioeconomic and political goals pursued by firms with government ownership may be diverting from return-seeking objectives of other shareholders, leading to greater agency costs.

### 2.4.3. Foreign ownership

In Figure 2.5, the share of non-domestic investment in listed companies as end of 2017 is reported for the ASEAN capital markets and other markets in the world. Among the ASEAN country members, Indonesia, and Singapore, with

around 40% of non-domestic shareholdings, are the biggest host markets for cross-border investors who are mainly private corporations and holding companies. The figures in Philippines, Vietnam and Thailand are also significant at around 20%. Despite being lower than other types of ownership, foreign ownership in the ASEAN has several striking features.



*Note:* This figure shows the share of total market capitalisation in the hands of non-domestic investors for the 10,000 largest listed companies covered by the report “Owners of the World’s Listed Companies” in OECD Capital Market Series, prepared by De La Cruz, A., A. Medina and Y. Tang in 2019 for 54 equity markets worldwide. The numbers shown in the figure represent non-domestic holdings as share of the total market capitalisation in each market as of end 2017. *Source:* [www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm](http://www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm) [Accessed 16<sup>th</sup> July 2022].

**Figure 2.5. Non-domestic investment in world capital markets as end of 2017**

Firstly, foreign institutions hold a dominant share of foreign portfolio investment in the region. Among ASEAN countries, Philippines is the largest home to foreign institutional investors with nearly 60% of the total non-domestic shareholding in the country (De La Cruz et al., 2019). This figure is also high in Thailand and Malaysia at above 40%. These investors possess typical characteristics of institutional investors with a long history of successful investment in other stock markets and their active trading strategies over all horizons.

Secondly, major cross-border portfolio investors in the ASEAN are from the US, the EU and Japan since the Global Financial Crisis 2007-2008 as the local economies gradually loosen their investment regulations. However, the origin of investors among ASEAN countries is not homogenous. In Singapore, the US and the EU are major financiers of securities while the share of Australia and other Asian economies such as Hong Kong, Japan, Korea, and China has been steadily growing in recent years (Shirai and Sugandi, 2018). US investors

contribute a large share of portfolio investment in Philippines and most of them are momentum investors who adopt a buy-and-hold strategy to maximize long-term capital gains (French and Vishwakarm, 2013). In other ASEAN countries, the value of cross-border portfolio assets held by the US and the EU is smaller but still the largest with 37% of the total, followed by intra-regional portfolio investment with 28%. Singapore is by far the biggest intra-regional investor and the top recipients are Indonesia and Malaysia. Indonesia, Philippines, and Thailand also actively make investments in their neighbouring economies. For instance, Indonesia increases its share of portfolio assets in Philippines from 0% during 2001-2007 to 17% in the post-crisis period of 2010-2016. On the other hand, despite the relatively small value, Japan rapidly grows its share of portfolio investment in the region as the result of attractive portfolio products offered by the local economies and reasonable stock prices compared to the market in Japan. De La Cruz et al. (2019) also highlight the difference in the profile of foreign investors between the ASEAN-6 and the ASEAN-4. While the former attracts more share capital from advanced Western markets, the latter is the host market for other Asian countries and intra-regional investors.

Thirdly, ASEAN countries are at different stages of opening their capital markets to foreign portfolio investment. While most founding members, except Thailand, have completely removed restrictions on foreign investors' purchase of equity instruments, the poorer member countries still maintain significant barriers on the rate of foreign ownership and the industries that allow foreign investment. Although restrictions are gradually relaxed, some ASEAN countries remain the most restrictive to foreign investment compared to other markets in the world (OECD, 2019). Under restrictive conditions, the degree of ownership depends on the trade-off faced by foreign investors between preferred investment opportunities and specific firm attributes that offer extra investor power (Batten and Vo, 2015). Humanicki et al. (2017) claim that the governments' efforts on protecting domestic capital market players restrain the inflow of foreign direct investment but contemporarily facilitate the growth of portfolio investment products. As international capital flows are diverting to emerging markets due to increasing trade tensions between the US and China, OECD (2019) identifies ASEAN countries as promising destinations for international portfolio diversification projects.

Fourthly, portfolio foreign investors in ASEAN stock markets can be grouped by two main investment strategies. Those adopting a short-term strategy aim to seek hedging opportunities to balance portfolio risks. Zainuri (2021) finds that international investors actively shift their portfolio investments to Indonesia and Thailand in response to increasing economic openness in these economies. Although the vulnerable ASEAN emerging markets are associated with high opportunity costs, they offer potential high returns in the short run. Short-term investors potentially initiate order imbalances through their aggressive trading behaviour and consequently cause higher information costs for uninformed investors (Alderighi and Gurrola-Perez, 2021). Furthermore, Riaz et al. (2021) add that foreign institutional investors with close business ties in Indonesia, Singapore and Malaysia have low incentives to monitor corporate management to secure their joint economic benefits. These passive shareholders play a minor role in reducing managerial suboptimal decisions. On the other hand, foreign investors with a long-term horizon actively participate in corporate management. For example, in Vietnam, Batten and Vo (2015) find that foreign investors adopt a buy-and-hold strategy to benefit from long-term growth prospects rather than seeking short-term returns on high dividend paying and liquid stocks. In addition, they prefer high-risk stocks to compensate the cost of cross-border investing and overcome inefficiencies in price adjustment in such emerging markets.

Fifthly, foreign share capital in the ASEAN is partly made through the channel of M&As and mostly takes place in Singapore and Thailand, and in retail, insurance, and real estate sectors (UNCTAD, 2021). However, the post-pandemic net sales of cross-border M&As in the region slumped from \$ US9.8 billion in 2019 to \$US-4.7 billion in 2020 due to the divestment of big corporations. The acquiring companies mainly come from Asian markets such as Korea, China, Hong Kong, and the ASEAN itself such as Thailand and Singapore. According to UNCTAD (2021), this trend indicates the acquisition of foreign-owned assets for both domestic and offshore expansion of local firms and leads to the presence of large foreign ownership in few ASEAN listed firms. For example, among the 18 major deals in ASEAN in 2020, 13 deals result in at least 80% of ownership for the acquiring company after M&A. While these firms may benefit from flexible management of financial sources and portfolio risk

diversification, their complex ownership structures simultaneously impose potential conflicts of interest between foreign and domestic shareholders (UNCTAD, 2018).

#### **2.4.4. Institutional ownership**

In Western economies, institutional ownership plays a crucial role in strengthening corporate governance and thereby aligning managerial behaviours with the interests of shareholders and stakeholders. Traditional institutional investors include pension funds, investment funds and insurance companies. According to OECD (2018), the value of total assets in the hands of institutional investors has more than doubled from \$US36 trillion to \$US84 trillion over the period 2000 to 2017 in OECD countries. In the US stock markets, institutional investors hold approximately 68% of shares in listed companies. However, institutional ownership is far less common in emerging Asian countries (see Table 2.10 and 2.11 in Section 2.4.1).

Unlike Western or advanced Asian stock markets, institutional investors in ASEAN countries are more inclined to a short-term investment vision and limited involvement in equity markets. In a study of Malaysian listed firms, Saleh et al. (2010b) find that institutional investors in Malaysia are mainly large trust funds which strategically invest in a portfolio of liquid stocks or bonds to seek short-term returns. Meanwhile, as end of 2017, the value of assets managed by funded and private pension funds in Singapore is largest among OECD countries at 80% of national GDP but these institutions make minor investment in equity markets. In other ASEAN markets, this type of ownership only accounts for less than 10% of the national GDP. OECD (2018) further reports that a majority of shares held by institutional investors in ASEAN countries belongs to foreign institutions. For example, 93% of institutional ownership in Philippines is attributed to foreign institutions. Meanwhile, institutional ownership in Vietnam stands at the bottom in the region with only 6% of the capital.

The monitoring role of institutional investors in ASEAN countries may be trivial due to their limited interests in corporate management. For example, short-term return seekers in Malaysia may aggressively initiate frequent trading to

maximize stock returns rather than paying attention to long-term management. Their investment behaviour therefore leads to greater volatility of stock prices (Bushee and Noe, 2000). In an empirical study, Vo (2016) suggests that domestic institutional investors in Vietnam have stabilizing effects on stock return volatility in firms with high dividend pay-outs. This provide further evidence that institutional investors in emerging markets are more driven by short-term returns in their investment decisions. In addition, the effect of foreign institutional investors on corporate governance in Philippines may be more complicated than domestic institutions due to their multi-national base. Collectively, the effect of institutional ownership on corporate decision-making in ASEAN countries might be largely dependent on the investment horizon and institutional settings of emerging markets.

## **2.5. Corporate reporting legislation and practice in ASEAN countries**

### **2.5.1. Major sources of financial reporting regulations**

Generally, the legislative framework for financial reporting is provided by company law and securities law in each ASEAN country. Tax reporting procedures are separated from financial reporting purposes so that tax legislation has no influence on the preparation of financial statements. This is different from several developed economies, such as Germany, Japan and France, where tax law imposes state objectives on financial reporting. Consequently, Craig and Diga (1996) affirm that the overall approach to financial reporting in the ASEAN region can be referred as microeconomic, rather than for the macroeconomic purposes of governmental financial planning. Table 2.13 illustrates the legislative framework for financial reporting in these countries.

Businesses in all ASEAN country members follow the provisions of their national company law which define key concepts of corporate activities and regulate various related aspects such as the field of activities, corporate governance structure, owners' obligations and rights, financing methods, financial accounts and audits, supervision and inspection, corporate dissolution, and liquidation. Information provided in the financial statements is primarily used for decision-making at an individual company level (Craig and Diga,

1996). Company and securities law directly address financial reporting issues to provide sufficient information for the demands of market users. Therefore, the setting and promulgation of accounting standards is to satisfy and protect the perceived interests of information users. Corporate financial reporting in all ASEAN countries adhere to their local GAAPs but few of them allow the full adoption of IFRSs.

In all ASEAN countries, companies who want to start their businesses are required by the local company law to register themselves with a relevant government body (Table 2.13). Companies are required to keep accounting records which sufficiently and accurately explain their material transactions and financial position. Listed companies, commonly referred as “public interest entities” in these countries, are subject to the listing and disclosure requirements set out by the Securities and Exchange Commission. Former British colonies, including Brunei, Malaysia, and Singapore, additionally require listed firms to provide a directors’ report accompanied with a profit and loss statement and balance sheet. The format and content of these financial statements are specified in company law in local languages. Vietnam, Laos, Indonesia, and Cambodia only accept the use of their native language in accounting while the others allow an English version of the financial statements.

ASEAN firms are required to publish an annual report at the end of every financial year. This report includes both financial and non-financial information and contains a mixture of mandatory and voluntary information. It is common among ASEAN countries that the minimum mandatory content of an annual report consists of corporate profile, director profile, chairman’s statement, financial highlights, statement on corporate governance including committees’ reports and statement on risk management and internal controls, statement of management’s responsibility for financial statements, independent auditor’s report, financial statements including statement of profit or loss and other comprehensive income, statement of financial position, statement of cash flows, statement of changes in equity and notes to the financial statements<sup>2</sup>. In

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<sup>2</sup> The thesis refers to listing requirements issued by stock exchanges in ASEAN countries (Cambodia – [www.csx.com.kh](http://www.csx.com.kh), Indonesia – [www.idx.co.id](http://www.idx.co.id), Laos - [www.lsx.com.la](http://www.lsx.com.la), Malaysia – [www.bursamalaysia.com](http://www.bursamalaysia.com), Myanmar – [www.yss-mm.com](http://www.yss-mm.com), Philippines – [www.pse.com.ph](http://www.pse.com.ph), Singapore – [www.sgx.com](http://www.sgx.com), Thailand – [www.set.or.th](http://www.set.or.th), Vietnam – [www.hsx.vn](http://www.hsx.vn)) and manual reading of a random sample of annual reports issued by ASEAN listed companies over the study period 2009 to 2017 to summarise the key content of annual reports.



Singapore and Malaysia, listed firms are additionally required to provide a management discussion of financial and operating performance and business outlook while this practice remains voluntary in other ASEAN countries. Since 2016, Malaysia further mandates the provision of a sustainability statement in the annual report to discuss the business impact on the economy, environment, and society while corporate social reporting is adopted on a voluntary basis in other countries.

**Table 2.13. Reporting legislation for listed companies in ASEAN countries as end of 2017**

| Country   | Companies law                      | Securities and exchange law        | Company Registrar  | Financial reporting guidance complemented to Laws                    | Accounting standards                            | Adoption of IFRS permitted? |
|-----------|------------------------------------|------------------------------------|--|--|---|-----------------------------|
| Brunei    | Companies Act 1957                 | Securities Market Regulations 2014 | Ministry of Finance  | None   | Brunei Darussalam Accounting Standard (BDAS)    | Yes<br>Since 2014           |
| Cambodia  | Law on Commercial Enterprises 2005 | CSX Rules and Regulations 2015     | Ministry of Commerce   | None   | Cambodian Financial Reporting Standard (CFRS)   | Yes<br>Since 2009           |
| Indonesia | Indonesian Company Law 1995        | Capital Market Law 1995            | Indonesia Investment Coordinating Board (BKPM) - Ministry of Trade                                     | None   | Indonesian Financial Accounting Standard (IFAS) | No                          |
| Laos      | Law on Enterprises 2005            | Law on Securities 2013             | Ministry of Industry and Commerce  | None   | Lao Accounting Standard (LAS)                   | No                          |
| Malaysia  | Companies Act 1965                 | Securities Commission Act 1993     | Companies Commission of Malaysia (SSM) – Ministry of Domestic Trade, Co-operatives and Consumerism     | Companies Commission of Malaysia Act 2001; KLSE listing requirements | Malaysian Financial Reporting Standard (MFRS)   | Yes<br>Since 2005           |
| Myanmar   | Myanmar Companies Law 2017         | Securities and Exchange Law 2013   | The Directorate of Company and Administration – Ministry of National Planning and Economic Development | None   | Myanmar Financial Reporting Standard (MFRS)     | Yes<br>Since 2010           |

**Table 2.13. Continued**

|             |  |                                     |   |   |  |                   |
|-------------|--|-------------------------------------|---|---|--|-------------------|
| Philippines | The Corporation Code of the Philippines 1980 | The Securities Regulation Code 2000 | The Philippine Business Registry (PBR) – Department of Trade and Industry   | Philippine Stock Exchange Listing and Disclosure Rules; SEC's Code of Corporate Governance 2017 | Philippine Financial Reporting Standard (PFRS) | Yes<br>Since 2010 |
| Singapore   | Companies Act 1994                           | Securities and Futures Act 2001     | Accounting and Corporate Regulatory Authority (ACRA) – Ministry of Manpower | Singapore Code of Corporate Governance 2001   | Singapore Financial Reporting Standards (SFRS) | Yes<br>Since 2003 |
| Thailand    | Public Limited Companies Act 1992            | Securities and Exchange Act 1992    | Ministry of Commerce  | SET's Disclosure regulations  | Thai Accounting Standard (TAS)                 | Yes<br>Since 2011 |
| Vietnam     | Enterprise Law 2014                          | Securities Law 2006                 | Ministry of Planning and Investment   | None  | Vietnamese Accounting Standard (VAS)           | No                |

Source: Craig and Diga (1996); Joshi et al. (2016), IASplus.com, IFRS.org [Accessed 7<sup>th</sup> February 2023].

### **2.5.2. Accounting standard setting authority**

Almost all ASEAN countries establish an independent regulatory body which is responsible for drafting, revising, and promulgating their local accounting standards, except Laos and Vietnam where the Ministry of Finance remains as the standard setter (Table 2.14). While the standard setting authority is normally a government agent, the Accounting Standard Council in the Philippines is a private sector professional body. This creates an autonomous and professional financial reporting framework in which the government acts as an advisor to comment on possible changes or take actions to enhance enforcement. According to Graham and King (2000), the government has a greater political influence on accounting practice where it retains direct control over the standard setting process, leading to the limited value relevance of accounting numbers.

Although most ASEAN members develop their local accounting standards on the IAS/IFRS basis, their colonial history and religious tradition influence the financial reporting environment to a great extent. Malaysia and Indonesia, the two Muslim-dominated countries, draft and revise their GAAP in accordance with both IAS and Islamic laws. They establish a separate set of accounting standards which are applicable to Islamic financial products. In another aspect, the former colonial administration is rooted in the legal systems of the ASEAN countries. Some of them are influenced by different accounting regimes as they were colonized by more than one country in the past. As a result, the harmonization of local GAAP with IFRS became challenging in this region.

ASEAN members also share a common characteristic of the involvement of the private sector in the setting process of accounting standards (Craig and Diga, 1996; Saudaragan and Diga, 1997). Accounting professional bodies and stock exchanges actively co-operate with government agencies to draft and comment on proposed changes in accounting standards. As shown in Table 2.14, in all ASEAN countries, professional bodies represent the voice of accounting practitioners in the development and revision of accounting standards but the degree of private sector influence varies across the country members. The standard setting bodies are in a

relatively powerful position to exercise their regulatory rights in some countries such as Singapore, Indonesia and Philippines. Meanwhile, the Brunei government retains its overwhelming dominant role in regulating standard setting process and even accounting profession because it is the primary regulator as well as the ultimate user of accounting information. Accounting profession bodies in Vietnam and Laos are also weak actors in the accounting regulatory framework as the Ministry of Finance exerts the ultimate control over accounting practice.

**Table 2.14. Accounting standard setting bodies in ASEAN countries**

| Country     | Primary basis for accounting standards | Independent accounting standard setting body?                 | Government agencies   | Private sector bodies  |
|-------------|--|---|---|--|
| Brunei      | IAS                                    | Yes<br>The Brunei Darussalam Accounting Standard Council      | Ministry of Finance   | Brunei Institute of Certified Public Accountants (BICPA)   |
| Cambodia    | IAS                                    | Yes<br>National Accounting Council (NAC)                      | Ministry of Economy and Finance   | . Kampuchea Institute of Certified Public Accountants and Auditors (KICPAA)<br>. Cambodia Securities Exchange (CSX)          |
| Indonesia   | IAS + Islamic law                      | Yes<br>Indonesian Financial Accounting Standards Board (DSAK) | . Capital Market Supervisory Agency (BAPEPAM)<br>. Ministry of Finance  | . Institute of Indonesia Chartered Accountants (IAI)<br>. Indonesian Stock Exchange (IDX)                                    |
| Laos        | IAS                                    | No<br>Ministry of Finance                                     | Ministry of Finance   | . Lao Institute of Certified Public Accountants (LICPA)<br>. Lao Securities Exchange (LSE)                                   |
| Malaysia    | IAS                                    | Yes<br>Malaysian Accounting Standard Board (MASB)             | . Financial Reporting Foundation (FRF)<br>. Malaysia Securities Commission<br>. Ministry of Finance<br>. Malaysian Institute of Accountants | . Malaysian Institute of Certified Public Accountants<br>. Kuala Lumpur Stock Exchange (KLSE)                                |
| Myanmar     | IAS                                    | Yes<br>Myanmar Accountancy Council (MAC)                      | . The Union Auditor General of the Republic of the Union of Myanmar<br>. Ministry of National Planning and Economic Development             | . Myanmar Institute of Certified Public Accountants<br>. Yangon Stock Exchange   |
| Philippines | US GAAP                                | Yes<br>Accounting Standard Council (ASC)                      | . Professional Regulation Commission (PRC)<br>. Securities and Exchange Commission  | . Accounting Standard Council (ASC)<br>. Philippine Institute of Certified Public Accountants<br>. Philippine Stock Exchange |
| Singapore   | IAS                                    | Yes<br>Accounting Standard Council (ASC)                      | . Accounting and Corporate Regulatory Authority of Singapore (ACRAS)<br>. Monetary Authority of Singapore (MAS)                             | . Institute of Certified Public Accountants of Singapore<br>. Stock Exchange of Singapore                                    |
| Thailand    | IAS                                    | Yes<br>The Federation of Accounting Professions (FAP)         | . Ministry of Commerce<br>. Securities and Exchange Commission (SEC)  | . Institute of Certified Accountants and Auditors of Thailand<br>. Securities Exchange of Thailand                           |

**Table 2.14. Continued**

|         |     |                                 |  |   |
|---------|-----|---------------------------------|--|---|
| Vietnam | IAS | No<br>Ministry of Finance (MOF) | . Ministry of Finance<br>. State Securities Commission (SSC) | . Vietnam Association of<br>Certified Public<br>Accountants (VACPA)<br>. Ho Chi Minh Stock<br>Exchange,<br>Hanoi Stock Exchange |
|---------|-----|---------------------------------|--|---|

Source: IASplus.com, <https://www.iasplus.com/en/jurisdictions/asia> [Accessed 16<sup>th</sup> July 2022]

### **2.5.3. Accounting harmonisation in the ASEAN**

The harmonisation of accounting systems in ASEAN is of crucial importance to develop a common marketplace for goods and services in this region. The success of AFTA and AEC strongly depend on the development of capital markets in individual country members, which accompanies with increased level of creditability and neutrality of accounting data (Saudaragan and Diga, 1998). This increases the need for a common set of investment regulations of which accounting harmonisation is an integral part (Kondo, 1992). Moreover, local governments in less developed countries also benefit from accounting harmony in terms of increased awareness of corporate ethics. Disclosure on corporate environmental impact or employee information have important policy-making implications to tackle social issues such as income disparity and environmental degradation (Howards, 1993; Parnwell and Bryant, 1996). In addition, the country members have a strong desire to attract FDI and host MNCs to develop their market infrastructure and promote technology transfer. Their efforts should be put on narrowing the gap between local and international accounting practice in response to foreign investors' demand. Accounting harmonisation, regardless of regional or international levels, eliminates barriers for intra-regional trade in terms of reduced compliance costs with different sets of local standards and proprietary costs of information (Dunne and Rollins, 1992; Lee and Choi, 1992).

Although the social and economic progress makes it impossible for ASEAN to stay behind the international trend, the association is faced with significant challenges in achieving a harmonised accounting system. The function of accounting differs among ASEAN country members due to their colonial histories. Singapore and Malaysia inherited the micro-user-oriented approach from the UK, which facilitates corporate transparency to serve individual capital providers. Meanwhile, the other countries have immature securities markets and their conservative accounting systems primarily serve the information need of governments and creditors. Those countries which are likely to gain minimal benefits from accounting harmonisation and therefore have limited commitment to regional integration initiatives (Saudaragan and Diga, 1998). Compared to industrialized economies, ASEAN



countries have inadequate research capabilities and other necessary resources to afford the cost of harmonisation. Additionally, their accounting education is traditionally geared towards auditing profession, minimising the holistic role of accounting in society (Saudaragan and Diga, 1997). Regionally harmonised accounting standards, therefore, may not be relevant to accounting practice in some country members.

The ASEAN Federation of Accountants (AFA) was established in March 1977 by five founding members and now include all ten members. AFA aims at providing a commonplace for national accountancy bodies from country members to “further advance the status of the profession in the region” (AFA, 1977, sec. 1a). The AFA Committee on Accounting Principles and Standards was appointed in the same year to develop a common set of accounting principles that are applicable to ASEAN’s conditions (AFA, 1978a, p.3). As a result, an exposure draft of ASEAN Accounting Standards No. 1 (AAS 1) Fundamental Accounting Principles was approved by AFA in 1978 to provide a benchmark for accounting practice in country members (AFA, 1978b). Rather than enforcement, AAS encourages members to put their efforts on aligning local accounting standards with ASEAN principles. AAS then fails to create the uniformity in ASEAN accountancy practice. Major accounting issues that lead to the failure is the diversity in local regulatory frameworks and institutional mechanisms (Sauradagan and Diga, 1997).

As opposed to the ASEAN’s unsuccessfulness in accounting harmonisation efforts at the regional level, individual country members are actively getting closer to international accounting practice to various extents. Among the founders, Singapore and Malaysia develop their local accounting standards based on IASs and IFRSs without noticeable modifications. Thailand and Philippines follow a UK-US mixed style so their GAAPs are generally aligned with IASs and IFRSs with some alterations to fit their specific conditions. Within the founding group, Indonesia has not yet adopted IAS/IFRS due to a conservative political approach and religious complexity. Among the newer members, Cambodia and Laos have accepted full IFRS adoption in public interest enterprises since 2009 and 2014, respectively, but local accounting standards still prevail. To a lesser extent,

Myanmar allows IFRS adoption with some exceptions which are regulated by MFRSs instead. Vietnam is far behind in the progress of harmonisation but has announced their timeline for full IFRS adoption by 2025. Given the varying institutional characteristics, it seems more feasible for ASEAN countries to adapt to existing international recognised standards instead of formulating their regional principles (Saudaragan and Diga, 1997; 1998).

#### **2.5.4. Recent developments in risk disclosure regulations in ASEAN countries**

In annual reports, the main section containing risk information is the statement of internal control and risk management. Listed firms in all ASEAN country members are required to include this statement in the governance section of the annual report (Singapore Code of Corporate Governance 2018; Malaysia Code of Corporate Governance 2021, Thailand Code of Corporate Governance 2017; Vietnam Corporate Governance Code of Best Practices 2018; Indonesia Corporate Governance Manual 2018; Philippines Code of Corporate Governance for Public Limited Companies 2016). Since the Asian Financial Crisis 1997/1998, ASEAN governments pay more attention to raise corporate awareness of the importance of risk disclosure and develop regulations to strengthen risk management practice.

While the focus of risk disclosure regulations is mainly on financial risk management after the Asian Financial Crisis 1997/1998, the Code of Corporate Governance in ASEAN countries have been recently upgraded to strengthen the importance of non-financial risk communication. For example, Malaysia and Singapore have provided guidelines on reporting sustainability and ESG risks in the Code of Corporate Governance and other legal documents such as Corporate Disclosure Guide, Stock Exchange Listing Rules and Sustainability Reporting Guide. Meanwhile, the Thai government emphasizes the necessity of discussing risks associated with value chain, ecosystem, competitiveness, stakeholders, and IT with specific risk management policies, plans and measures. Vietnam and Indonesia also show their strong efforts in providing detailed guidelines on the disclosure of non-financial risks such as strategic risks and cybersecurity risks.

The disclosure regulatory frameworks in ASEAN countries have been progressively developed to incorporate contemporary environmental, social and governance issues in risk reporting requirements. According to the 2018 report of the World Business Council for Sustainable Development<sup>3</sup> (WBCSD), 75% of reporting provisions in the region by listed companies are on a mandatory basis. However, 85% of the reporting requirements require disclosure through online response systems, questionnaires, or online forms while disclosures through the mainstream management reporting or sustainability reports are modest. Therefore, sustainability information is mainly accessible by an authority or a government agency and remains limited to public investors. Moreover, WBCSD (2018) reveals that ESG reporting regulations in ASEAN countries focus more on requiring firms to identify and manage their environmental impacts while social and governance issues are paid less attention.

## **2.6. Summary**

In this chapter, the institutional characteristics of ASEAN country members have been comprehensively discussed. A majority of countries in this region are characterised as emerging and underdeveloped economies except Singapore. Compared to other regional economic groups, the ASEAN is uniquely featured as widely diversified in multiple aspects including the level of economic development and regulatory background. In the second section, the chapter has focused on discussing the ownership of ASEAN listed firms by identity. Government ownership is prevalent in ASEAN countries due to the leading role of the government in developing the economy in early years of independence. Meanwhile, the growth of foreign ownership in the region is the result of the increasing trend in cross-border M&As and the expansion of MNEs into the country members. Compared to other economies in the world, institutional ownership is less common in ASEAN countries and is mainly attributed to foreign institutions. In the final section, this chapter provides an insight into the corporate reporting practice in the region. The country members mainly rely on their national accounting standards to regulate

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<sup>3</sup> The 2018 report on Corporate and Sustainability Reporting in Singapore and Southeast Asia is published by the World Business Council for Sustainable Development on 17<sup>th</sup> October 2018, available at <https://www.wbcscd.org/Programs/Redefining-Value/Resources/Corporate-and-sustainability-reporting-in-Singapore-and-Southeast-Asia> [Accessed 16<sup>th</sup> July 2022].

financial reporting while the transition to IFRS adoption is underway in few countries. On the other hand, the ASEAN governments have been recently making strong efforts on developing regulations for non-financial risk reporting but the level of practice in majority of ASEAN firms remain low. Corporate information is predominately available on a mandatory basis, suggesting that ASEAN firms are more likely to respond to changes in disclosure regulations to maintain their legitimate status and avoid litigation costs. Enforcement tends to be more effective than voluntary measures in promoting corporate transparency in these countries.

# **CHAPTER 3: OWNERSHIP STRUCTURE AND STOCK MARKET IMPLICATIONS OF FORWARD-LOOKING AND RISK DISCLOSURE: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

## **3.1. Introduction**

This chapter is organised to provide an in-depth review of related theories and empirical results regarding the impact of ownership structure on the extent of corporate information disclosure. The chapter also discusses theoretical predictions and previous empirical findings about the impact of information disclosure on the stock market. Based on the literature review, hypotheses are developed to examine the ownership-disclosure association and stock market implications of disclosure by listed firms in ASEAN countries. This chapter is divided into four sections. The first section 3.2 reviews relevant theories which explain corporate incentives for disclosure. Section 3.3 provides a critical review of theoretical predictions on the impact of ownership identity on disclosure. Section 3.4 subsequently provides a theoretical review on the stock market implications of corporate disclosure. In the final section 3.5, empirical findings in previous studies are critically discussed to support the development of hypotheses.

## **3.2. An overview of disclosure theories and the relevance of ownership structure to corporate disclosure**

### **3.2.1. Agency theory**

According to agency theory, the conflict of interest arises from the contractual relationship between the principal and the agent. Jensen and Meckling (1976, p.308) define this relationship as “a contract under which one or more persons (principal(s)) engage another person (the agent) to perform some services on their behalf which involves delegating some decision-making authority to the agent”. Under a business context, the separation between ownership and control creates agency problems between shareholders and managers. Given the discretion in decision-making, managers may not fulfil their contractual obligations by pursuing their self-interests instead of maximizing shareholders’ wealth. On shareholders’

side of view, the unobservability of the agent's actions makes the principal unable to accurately evaluate the agent's performance (Beekes et al., 2016). Therefore, disclosure is preferred by the principal to reduce his (her) uncertainty about the appropriateness of managerial decision-making.

Monitoring costs are incurred by the principal to limit the agent's opportunistic behaviour (Jensen and Meckling, 1986). One common type of monitoring costs is the expense on designing an appropriate compensation plan which can be either performance-based or stock-based (Harris and Raviv, 1979; Holmstrom, 1979). Tirole (1999) claims that stock-based incentives outperform a performance-based contract as share price absorbs information timelier and more accurately than accounting performance measures. Jensen and Meckling (1976) predict that managerial ownership helps to align managers' interests with those of shareholders and thereby having a favourable effect on the extent of disclosure. When investors recognise the likelihood of sub-optimal decisions made by managers, they will discount the prices they are willing to pay for the firm's shares. Stock incentives urge managers to increase disclosure to reduce this uncertainty and consequently to benefit from share price increases due to the lower cost of capital (Healy and Palepu, 2001).

However, the alignment effect of managerial ownership depends on the influence of time horizons on managerial decision-making. According to Fama (1980), managers attempt to balance the *ex-post* settlement, representing future consequences of current opportunism, and immediate expropriation of shareholders. They are more likely to adopt a short-time horizon in the absence of *ex-post* settlement and issue misleading disclosures to conceal their sub-optimal behaviour.

Another prediction of the agency theory is that information asymmetry is high in firms widely held by outside owners. Jensen and Meckling (1976) explain that the ownership dispersion gives rise to the conflict of interest between managers and external shareholders who have limited monitoring power on managers' decision-making. Therefore, diffused external ownership encourages firm to exhibit greater disclosure to reduce agency costs (Shleifer and Vishny, 1997). Institutional

shareholders have the incentive and ability to acquire good quality information in a timely manner. Their expertise assists them in detecting dysfunctional managerial behaviour and promoting a rich information environment within a corporation (Dhaliwal et al, 1982; Rajgopal et al, 1999). They also possess financial know-how to interpret financial information and evaluate financial decisions made by management. Additionally, institutions normally obtain a significant shareholding which enables them to achieve sufficient voting power to take corrective actions when necessary.

In firms with foreign ownership, it is theoretically suggested that the agency conflicts are more severe. When investing in a foreign country, investors are faced with greater information asymmetry due to the geographical distance, the unfamiliarity with local regulations and language barriers (Schipper, 1981; Bradbury, 1991). This is referred to as a *home bias* problem which places foreign investors at a higher level of risk on their offshore investments (Douma et al., 2006; Mangena and Taurigana, 2007, Broberg et al., 2010). Therefore, they have the motivation to influence the management to exert greater disclosure to assist themselves in decision-making.

### **3.2.2. Stakeholder theory**

According to this theory, the management of a corporation needs to view its roles and responsibilities beyond value maximization to include stakeholders' interests and claims in developing corporate strategies (Roberts, 1992). Freeman (1984, p.46) defines a stakeholder as "a group or an individual who can affect or is affected by the achievement of an organization's objectives". Stakeholder approval is required by firms to exist and grow (Freeman, 1983). A business normally interacts with various stakeholders including customers, suppliers, owners, employees, political interest groups and the community. Therefore, one of corporate objectives is to balance conflicting demands of those stakeholders (Ansoff, 1965).

The involvement of stakeholders with corporate disclosure comes from two main schools of thought. Firstly, it is ethical for a firm to address stakeholders' concerns

as they have intrinsic rights regarding the firm's consumption of their resources (Deegan, 2000; Deegan and Samkin, 2009). Thus, all stakeholder information should be provided with respect to how the business affects them. Secondly, from a managerial perspective, the firm actively addresses which group of stakeholders have the power to influence its survival and success and then considers how to satisfy them by means of information disclosure (Watts and Zimmerman, 1986; Roberts, 1992). As stakeholders' concerns are non-economic impacts of the business, corporate social disclosure is the primary form of communication that firms employ to influence public perceptions (Gray et al., 1995; Deegan, 2002; Milne, 2002). Beyond the goal of value maximization, firms should communicate how they allocate limited available resources in a manner that is consistent with stakeholders' interests. Information disclosure is, therefore, important to manage stakeholder relations and maintain legitimacy of business organizations (Roberts, 1992; Adams et al., 1998; Haniffa and Cooke, 2005). Some specific owners have strong interest in stakeholders' needs as share prices will be adversely affected if their companies fail to address stakeholders' concerns (Qu, 2007). Institutions, commonly holding a large share in a company, have the incentive to align managers' decisions with stakeholder's needs as they are sophisticated and long-term investors (Barako et al., 2006; Donnelly and Mulcahy, 2008). Foreign investors also have a vital effect on corporate reporting due to their demand in bridging the information gap with the host country (Bradbury, 1991; Haniffa and Cooke, 2005). These types of shareholders tend to be more attentive to stakeholders' concerns and have the ability and expertise to urge managers to disseminate more stakeholder-related information.

As firms are constrained by limited resources, managers may adopt a selective approach to address stakeholders' concerns (Aluchna et al., 2022). The stakeholder salience perspective introduced by Mitchell et al. (1997) suggests that the priority of stakeholders' claims is determined by their power, legitimacy, and urgency. Managers are more likely to address the concerns of stakeholders who are assessed high in all three attributes. A stakeholder with a high salient status should have greater influence on a firm's disclosure decision. When getting involved in corporate ownership, the government simultaneously acts as a



shareholder and a powerful stakeholder (Khan et al., 2013; Hu et al., 2017). To achieve its social and political objectives, the government tends to pressure companies to meet the information demand of the wider public, including different groups of stakeholders, rather than merely communicating with potential investors. Hu et al. (2017) add that institutional investors with a long-term investment vision also have high salience due to the size and enduring focus of their shareholdings. These investors have the intention and ability to establish sustainable relationships with their investee firms and therefore managers are more likely to fulfil their informational requests.

### **3.2.3. Signalling theory**

Signalling theory traditionally explains the adverse problem in the labour market where the employee knows more about his skills than the employer. The asymmetric information leads the employer to offer an unfair wage to a capable worker due to the unobservability of his skills, and vice versa (Akerlof, 1970; Spence, 1973). Therefore, it is rational for the seller of human resources, or of any other type of product, to communicate the quality with potential buyers to be paid at the right price. A similar problem occurs when companies have superior access to internal information over outsiders. Signalling theory suggests that it is rational for a firm to send signals about their performance, making it easier for investors to select or reward them (Spence, 1973; Ross, 1977). From a business perspective, intense competition in capital markets encourages well-performing firms to distinguish themselves from poorly performing counterparts through the disclosure of value-relevant information and the appropriateness of their activities (James and Shaver, 2016). As a result, they can attract potential investments (Verrecchia, 1983), attract alliance and licensing partners (Harhoff et al., 2003) and enhance their public image (James and Shaver, 2016).

Given a certain level of agency conflict, managers are motivated to send signals to external shareholders showing that they are behaving for their best interests. Those signals can be made by increasing communication about multiple facets of the company's performance and strategies and, thereby, improving their understanding of the managers' efforts and successes in creating value for

shareholders (Spence, 1973; Connelly et al., 2011). Additionally, Spence (1974) argues that managers also employ disclosure to alter the perceptions of or send decision-useful messages to investors in the market. These signals are rationally interpreted by investors when estimating the target firm value (Connelly et al., 2011). Useful information, therefore, reduces investors' search costs for information and the uncertainty in the stock pricing process, and ultimately reduces the cost of capital (Botosan et al., 1997). Disclosure can also be used to signal the management competence. For example, Trueman (1986) shows that managers make forward-looking information observable to outside investors to exhibit their ability to estimate future earnings. By doing so, managers distinguish themselves from other colleagues in the labour market and subsequently enhances their opportunity for better job offers.

Signalling theory stresses that it seems inefficient if firms simply disclose whatever information they want to the market. While firms have the discretion in choosing whether and what to disclose, investors have their own ways of interpreting the signals received from firms. They rationally respond to both disclosure and non-disclosure, to disclosures of both good news and bad news. For firms, increased disclosure simultaneously leads to a greater exposure to litigation and reputation costs as they become more visible to outsiders. Once a signal is proven not to reflect true quality, no more disclosures can be perceived as good signals. Therefore, a signal must be credible to signal quality successfully (Connelly et al., 2011; Watson et al., 2002). Credibility can only be achieved if the real quality of the reporting firm is verifiable. In addition, to be better off, signals used by good-quality firms must be costly to imitate for those who do not possess the required quality (Morris, 1987).

#### **3.2.4. Legitimacy theory**

Legitimacy is the status that an organization operates within the bounds and norms of a social value system of which it is a part. The organization-society interaction is considered a "social contract" which sets out how the organization should behave to be accepted as legitimate by the society (Brown and Deegan, 1998). The theory assumes that the community has the right to understand business activities and

impose legitimate expectations about how the business should be carried out. Once the firm's value system is not congruent with the larger social value system, there will be a legitimacy gap which threatens the sustainable development, and even the survival, of the firm (Lindblom, 1994).

Legitimation is a process enacted by organizations to achieve the state of legitimacy. There are two ways of explaining corporate incentives to actively incorporate community expectations into business strategies. On one hand, according to the resource-based hypothesis, legitimacy can be considered as an integral resource without which firms cannot survive (Deegan, 2002). Therefore, they attempt to behave in a manner that is desirable by the society. On the other hand, from an institutional view, the society creates external social and cultural pressures that influence corporate goals (Suchman, 1995). Managers should be aware of the detrimental consequences on business operations if they fail to adapt to community expectations. Ever-changing societal expectations require firms to responsively make on-going appropriate actions to maintain their legitimate public image.

One important function of accounting is to legitimise the existence of an organization. Disclosure is considered a means by which social values are linked to economic actions (Richardson, 1987, Deegan, 2000). As an important legitimation tool, voluntary disclosure demonstrates firms' awareness of the importance of societal expectations and how they deal with their effects on the community (Hogner, 1982). Legitimacy theory, additionally, stresses that the extent to which an organisation is exposed to public scrutiny largely depends on the industry environment (Patten, 1991; Adams et al., 1998; Campbell et al., 2003). Firms with high visibility to the public are more sensitive to external societal pressures. As a result, they pay more attention to developing a socially responsible image to avoid litigation and reputational risks (Verrecchia, 2001).

Shareholders potentially influence a company's legitimation strategy which affects the company's survival and growth. Regarding the types of owners, prior studies suggest that firms with foreign and government ownership have incentives to employ disclosure to obtain legitimacy. According to Khan et al. (2013), foreign

investors have different values and limited knowledge about local business protocols, compared to domestic counterparts. Therefore, firms with high foreign ownership may adopt information disclosure as a strategy to obtain legitimacy. Meanwhile, Hu et al (2017) argue that the strong reliance of state-owned firms on the government's provision of critical resources and legitimacy makes them more attentive and responsive to the government's disclosure initiatives. By satisfying the government's information demand, these firms attempt to maintain their legitimate status and thereby their continued access to resources.

### **3.2.5. Cost-based theories**

#### **3.2.5.1. Political cost theory**

Watts and Zimmerman (1978, p.115) state that politicians attempt to redistribute social wealth by imposing corporate taxes and regulations on corporations. They pay attention to businesses and require them to comply with regulations including accounting standards (Deegan, 2009). Their political targets are potentially different from firms' economic incentives while firms unavoidably interact with the political and societal environment. This theory suggests that firms are exposed to political costs arising from legal actions against inadequate or untimely disclosure. Thus, firms need to consider the societal and political consequences of their decisions to maximize value (Watts and Zimmerman, 1978; Gladwin et al., 1995; Healy and Palepu, 2001; McWilliams and Siegel, 2001). Roberts (1992) asserts that firms obtain legislative benefits by making favourable disclosures to politicians so increased disclosure will help to reduce the likelihood of adverse legal actions.

Political cost theory suggests that firms are driven by economic interests in their disclosure policy. For example, Gamerschlag et al. (2010) find that firms voluntarily make disclosures on CSR and environmental impact of their business in exchange for favourable prices of outputs and high-quality worker loyalty. Further, firms want to signal their ethical use of social resources to gain more support from stakeholders and temper possible legal actions (Watts and Zimmerman, 1978). In such way, this theory is relatively close to stakeholder theory. Increased disclosure after a major regulatory change or a political event provides further evidence on

corporate response to the public's increasing sensitiveness to information (Cahan, 1992; Mitra and Crumbley, 2003).

Some types of owners can have an impact on a company's sensitiveness to political cost. Williams (1999) explains that the government, as a majority shareholder, can put pressure on management to pursue political and strategic goals in tandem with profit maximisation. Therefore, firms with significant government ownership are more likely to support state disclosure initiatives. In contrast, Eng and Mak (2003) argue that a strong political connection protects government-owned firms from greater scrutiny and therefore reduces their exposure to political costs. This subsequently impedes managers' incentives for disclosure and makes disclosures less useful for investors. Meanwhile, foreign investors are faced with greater political costs as they are unfamiliar with local investment rules and business protocols (Haniffa and Cooke, 2002; Khan et al., 2013). Firms with foreign ownership are therefore motivated to exhibit greater disclosure to mitigate the information gap with local firms and protect themselves from adverse legal actions (Megginson and Netter, 2001).

#### **3.2.5.2. Capital need theory**

Capital need theory assumes that firms are motivated to voluntarily provide information to investors in exchange for a lower cost of capital (Choi, 1973). Due to the information asymmetry, investors charge a premium into their required return on investment as a compensation for the unobservability of information (Merton, 1987). Greater availability of information makes investors less uncertain about the firm's activities; hence, they lower the rate of return which is favourable to the reporting firm. Core (2001) finds that mandatory disclosure is not enough to obtain external capital as cheap as possible. While mandatory disclosure is set out to meet the minimum amount of information required by policymakers, voluntary information is perceived by investors to better represent a firm's desire for transparency. Intense competition on capital markets implicitly facilitates voluntary disclosure attempts to attract capital providers at a reasonable cost (Choi, 1973).

However, the presence of a state owner may impede managers' propensity for disclosure to reduce the cost of capital. Financial support from the government reduces state-owned companies' dependencies on external resources, so public disclosure is perceived as unnecessary (Naser et al., 2006). Hung et al. (2018) explain that the government, as a paramount shareholder, has the power to influence and ease the investee company's access to credits and privileged loans. Government-linked firms therefore face less pressures on raising finance from private investors and consequently have less incentives for disclosure.

### **3.2.5.3. Proprietary cost theory**

Proprietary cost theory assumes that a disclosure decision is restrained by the likelihood that competitors and other parties may use the information in a detrimental way to the disclosing firm. Accordingly, firms are more likely to conceal value-relevant information to maintain their competitive advantage against industrial rivals. In other words, Verrecchia (1983) argues that firms are discouraged from disclosing information that is associated with high proprietary costs. This prediction is opposite to what is explained by adverse selection problem (Grossman and Hart, 1981; Milgrom, 1981) and agency problem (Jensen and Meckling, 1976).

Verrecchia (1983) finds that firms in innovative industries are more at risk of revealing their know-how, so they are less likely to make their information observable to competitors. Dissemination of information may either aid existing industry rivals in competing against the disclosing firm or facilitate them to imitate the disclosing firm's strategies (Brown et al., 2006; Arya and Mittendorf, 2007). It is also observed in the existing literature that information regarding profitable segments, material contracts and earnings forecasts is associated with high proprietary costs in an intensively competitive industry (Bamber and Cheon, 1998; Harris, 1998; Verrecchia and Weber, 2006). This theory predicts that firms may exceptionally adopt a "bad news" disclosure strategy to deter new entrants into the industry (Darrough and Stoughton, 1990).

Increased information disclosure may simultaneously reduce agency costs but increase proprietary costs. For instance, Ellis et al. (2012) explain how a firm's disclosure of customer identities is affected by this trade-off. On one hand, this makes potential investors better informed of the firm's well-managed customer base, especially if the customers are those who perform well in their own industries (Dye, 1986; Lang and Lundholm, 1996). On the other hand, this information is also favoured by competitors who may approach the firm's current customers to build up trading relationships. As a result, the disclosure decision is influenced by the extent to which a firm is affected by these two costs (Verrecchia, 1983, 2001; Dye, 1985; Darrough and Stoughton, 1990; Wagenhofer, 1990; Healy and Palepu, 2001).

Government ownership may reduce a company's disincentive associated with proprietary costs (Hung et al., 2018). Political connections make firms less exposed to competition and rivalry threats due to the guaranteed returns by the government (Hu et al., 2017). As increased disclosure does not bereave these firms of their competitive advantage of enjoying privileged government supports, they are less constrained by proprietary costs in their disclosure decisions. Consequently, it can be expected that firms with government ownership dispense more voluntary information than those with no political ties that bear proprietary costs of disclosures.

Likewise, the presence of foreign ownership may also reduce managers' sensitiveness to proprietary risks. Cross-listed firms with foreign ownership have more incentives to demonstrate their desire for transparency in exchange for better access to external finance in the host market. This benefit outweighs the proprietary costs associated with disclosures, leading to greater availability of value-relevant information. Sang et al. (2020) stress that this association would be more pronounced when firms cross-list their shares in an advanced stock market.

The cost-based theories suggest that managers consider the trade-off between benefits and costs associated with disclosures to achieve an optimal disclosure level. Makhija and Patton (2004) explain this trade-off by two conflicting motivations of corporate owners in their effect on disclosure management. On one

hand, shareholders with absolute controlling power have incentives to withhold information to conceal private benefit extraction. In the contrary, a reduction in shareholding weakens shareholders' power in securing private benefits. To maximize stock returns, they have more incentives to align their interests with other shareholders' by increasing disclosure. This means the ownership effect on disclosure varies with the levels of shareholding.

To sum up, the theoretical background shows that information asymmetry and the stewardship problem are fundamental causes behind the management's incentives for disclosure (Healy and Palepu, 2001; Watson et al., 2002; Heitzman et al., 2010). While managerial ownership plays a crucial governance role in monitoring managers' behaviour, some specific types of external owners, with sufficient power, knowledge, and ability, can influence managers' decision-making and thereby the levels of information disclosure. The above discussion further reveals that theories have conflicting predictions on the impact of ownership on disclosure, which leave the topic an empirical question.

### **3.3. Some key concepts in narrative disclosure research**

#### **3.3.1. The level of disclosure and the quality of disclosure**

Disclosure level refers to the extent of information disclosed by firms in a specific report or related to a specific topic. As one of the first disclosure studies, Botosan (1997) suggests that voluntary disclosure in annual report narratives can be captured by recording the presence or absence of disclosure items. A disclosure index, defined as the total number of disclosed items divided by the maximum items in the checklist, is attributed to a firm's disclosure level. As Botosan (1997) claims that the quality of disclosure is an abstract construct which is immeasurable, she heavily relies on disclosure quantity to infer disclosure quality. Other studies appreciate quality by giving weights to disclosure items according to predefined rankings constructed by researchers (Singhvi and Desai, 1971; Firth, 1979; Robb et al., 2001). However, the later approach is subjective because researchers have different perspectives on what information is more important in narrative reporting.



Disclosure quality is inherently a latent and abstract variable which is difficult to measure. Hopkins (1996) considers disclosure quality as the extent to which current and potential investors read and interpret the information easily while King (1996) refers to it as the degree of management's bias in the disclosed information. Core (2001) believes that disclosure quality is associated with management's ongoing ex-ante commitment to disclose information. While it is relatively straightforward to assess the quality of financial statements as they are incorporated in accounting standards, there is no benchmarks to evaluate the quality of narrative disclosures. Beattie et al. (2004) add that this concept is context-sensitive and subjective, so it is impossible to achieve a universally accepted definition.

Some studies have focused on examining specific topics of disclosure, such as forward-looking and risk information, which are stressed in disclosure regulations, professional bodies' disclosure guidelines and financial analysts' recommendations as useful for the estimation of a firm's market value (AICPA, 1994; ICAEW, 1999; CICA, 2001; FASB, 2001; CICA, 2002; ICAEW, 2002; ICAEW, 2003). Sharing information about such topics improves earnings predictability of disclosures (Hussainey et al., 2003; Li, 2010b) and enhances investors' valuation of firms (Elshandidy et al., 2015; Hassanein and Hussainey, 2015; Elshandidy et al., 2018; Hassanein et al., 2019). Thereby, increased disclosure of value relevant information is associated better disclosure quality.

Nevertheless, disclosure level merely focuses on "how much" information is disclosed while ignoring "what" and "how" information is disclosed (Beretta and Bozzolan, 2004). Using a unidimensional measure is insufficient to capture quality. Given the inherent conceptual difficulties, there is a strong research interest in identifying specific characteristics that describe some important aspects of disclosure quality. For example, Beattie et al. (2004) propose four dimensions in assessing the quality of narrative reporting including the topic, financial/non-financial, time orientation and quantitative/qualitative. The framework is adopted in Beretta and Bozzolan (2004) when evaluating risk disclosure and Beretta and Bozzolan (2008) when evaluating forward-looking disclosure. Meanwhile, Qu et al.

(2015) associate the quality of forward-looking information with precise forecasting information such as point estimates, open intervals, and closed intervals. In another study, Bozzolan et al. (2009) classify forward-looking disclosures by the verifiability of information. In Al-Najjar and Hussainey (2014), forward-looking information is considered of good quality if it is related to earnings. Krause et al. (2017) employ qualitative forecast properties such as forecast horizon, precision, and tone. While the number and the type of qualitative dimensions vary with users' perspectives through which disclosure is observed and evaluated, recent developments in the field suggest that disclosure quality should be treated as a multifaceted construct in which disclosure level is only one dimension.

### **3.3.2. The definition and nature of forward-looking disclosure**

The importance of forward-looking information disclosure is stressed by different stock exchange authorities and professional bodies, particularly in annual report narratives. While there is no consensus in defining forward-looking disclosure, one can rely on reporting regulations and guidelines to understand what characteristics they should look for when analysing this type of information. In the UK, the ASB advises directors to maintain a past, current, and future viewpoint in their discussion of operating results (ASB, 1993). ASB (2006) later underlines that the discussion of future key trends should be adopted as a means of best practice reporting by listed companies in the "Reporting Statement: Operating Financial Review". Likewise, CICA (2001) explains that forward-looking information refers to future events, decisions, strategies, visions, opportunities, and risks that are likely to have a material effect on future results. This disclosure also explains how future outcomes may be affected by past decisions. Listed firms in the US are guided by the SEC to include projections in the MD&A such as plans, events, commitments, trends, and uncertainties that are likely to influence company liquidity, capital resources or future operations. The Jenkins committee (AICPA, 1994) suggests that a forward-looking perspective refers to the focus on long term value drivers in corporate financial reporting. In his PhD thesis, Hussainey (2004) attributes forward-looking information to a company's current plans and projections that allow users to evaluate its future performance.

Forward-looking disclosure contains diverse types of information. It can comprise quantitative, qualitative, financial, and non-financial information (Aljifri and Hussainey, 2007; Al-Najjar and Abed, 2014). While the importance of forward-looking disclosure is highlighted many official pronouncements, it is still largely provided on a voluntary basis due to the lack of detailed regulations. Firms use annual report narratives to disseminate forecasts on financial statement items or express qualitative expectations about non-financial matters (Krause et al., 2017). Therefore, forward-looking information in annual reports provides a more comprehensive view of future performance, compared to other sources such as press releases and conference calls. Simultaneously, forward-looking narrative disclosure is subject to managers' self-selection bias so a sizable portion is allocated to good news than bad news, to non-verifiable than verifiable information (Muslu et al., 2015; Krause et al., 2017; Buertey and Pae, 2021). As a result, the usefulness of forward-looking narrative disclosure to decision-making remains an open empirical question.

### **3.3.3. The definition and nature of risk disclosure**

The word "risk" has been defined from different perspectives in the existing literature. Traditionally, "risk" is associated with negative or "bad" outcomes. For example, Lupton (1999) attributes "risk" to threats, hazards, or harm while Horcher (2005) associates the construct with the possibility of loss. Some disclosure regulations also explain risks in a negative sense. In the Financial Reporting Release No.48, SEC defines market risks as the loss arising from adverse changes in market rates or prices (Hodder et al., 2001). Likewise, ASCG defines "risk" in the German Accounting Standard No.5 as "the possibility of a future negative impact on the economic position of a group" (Elshandidy et al., 2015).

In a broader sense, the modernist view employs a two-side risk concept which implies both potential gains and losses. Watson and Head (1998) defines risks as a set of outcomes arising from a decision that can be assigned probabilities. This definition emphasizes the measurability of the outcomes, either they are positive or negative, under different situations. Given the limited capability in measuring risks in this ever-changing business world, supporters of the modernist view develop the

definition of risk to referring to a range of different outcomes that can be upside or downside. The broad risk concept applied in Linsley and Shrives (2006) refers to any opportunity, prospect, hazard, danger, harm, threat, or exposure that has already impacted the company or may have an impact upon the company in the future. Abraham and Cox (2007) incorporate these changes by recognizing risk as variation, uncertainty, and opportunity. Several follow-up studies capture risks as fluctuations around an expected value, implying the inclusion of both potential gains or losses (Elzahar and Hussainey, 2012; Elshandidy et al., 2013; Ntim et al., 2013). ICAEW, as one of the professional accountancy bodies, also acknowledge this development in their risk disclosure guidelines by comprising both positive and negative outcomes of events (ICAEW, 1999; 2002).

In the existing literature, it is still debatable whether risks should be viewed as potential gains or opportunities in addition to the negative side. Ibrahim and Hussainey (2021) argue that risks are more described as something “bad” rather than “good” in advanced disclosure regulations, dictionaries, and finance textbooks. Moreover, the number of negative words or phrases outweigh the number of positive words in dictionary-based risk disclosure studies. Nevertheless, advocates of the modernist view insist that it is more comprehensive to consider risks as variability of expected outcomes rather than merely looking on the downside (Hassanein, 2019). As risk disclosure partly includes a company’s actions or plans to mitigate potential threats or deal with potential opportunities and their evaluation of those plans. In this sense, risk disclosure covers the dissemination of risk management practice and therefore it is associated with a positive view of proactive management (Oliveira et al., 2011). This indicates a gap between what “should” be captured, as recommended in disclosure regulations and guidelines, and what “can” be captured, given the challenges and complexity faced by firms in risk disclosure practice.

#### **3.3.4. The tone of disclosure**

Tone is an attribute of disclosure referring to the use of optimistic and/or pessimistic language by managers in narrative disclosures to convey material information about the company. The positive (negative) tone can be captured

through the count of positive (negative) words under different forms such as nouns, adjectives, or verbs within a particular document (Sydserff and Weetman, 1999). To capture the full spectrum of positivity and negativity in a document, Loughran and McDonald (2016) suggest comparing the proportions of positive words and negative words to infer an aggregate tone. Thereby, higher proportions of negative words imply a more pessimistic tone and vice versa. Likewise, several studies use the difference between the number of positive and negative words to examine whether managers use more positive words versus negative words (Price et al., 2012; Arslan-Ayaydin et al., 2016; Boročin et al., 2018; Bassyouny et al., 2022).

The implications of disclosure tone are context-sensitive and therefore its measurement requires cautiousness. For example, Brau et al. (2016) consider prefixes and negation when measuring disclosure tone as they would convert a positive word into a negative word and vice versa. Bassyouny et al. (2022) suggest that disclosure tone should be interpreted as management's use of language rather than a measure of good (bad) news disclosures. While good (bad) news is related to actual events happened over the reporting period such as sales increases or risk mitigation, managers may attempt to inflate disclosure tone to impress or obfuscate readers (Arslan-Ayaydin et al., 2016). Thus, not all positive words, phrases or sentences are about good news (Schleifer, 2012; Bassyouny et al., 2022).

### **3.4. The measurement of narrative disclosure**

#### **3.4.1. The measure of disclosure**

Prior studies employ a disclosure index to measure the extent of disclosure. This index is computed through a scoring procedure based on a checklist of items which can be either self-developed (Kelton and Yang, 2008; Al-Akra et al., 2010; Broberg et al., 2010) or taken from independent sources such as state agencies and professional accounting bodies (Barako et al., 2006; Aksu and Kosedag, 2006). Accordingly, a firm is scored as 1 if it discloses an item and 0 otherwise. The firm's disclosure index is the ratio between the total of items it discloses to the

maximum items in the checklist. The calculation of this disclosure index can be based on either a weighted or unweighted method. The unweighted approach can eliminate the subjectivity of scoring (Gray et al., 1995; Meek et al., 1995; Adrem, 1999; Ferguson et al., 2002; Donnelly and Mulcahy, 2008; Chau and Gray, 2010) while the weighted approach better considers different disclosure opportunities in different organisational corporate structures (Botosan, 1997; Hossain et al., 1994; Barako et al., 2006).

An alternative approach to rely on a content analysis which captures the frequency of words, phrases or sentences appearing in corporate reports. For example, Li (2006) counts the number of occurrences of risk-related words to capture the extent of risk disclosure in 10-K filings. Meanwhile, Linsley and Shrives (2006) count the number of sentences which contain at least one risk-related word when examining the level of risk disclosure among UK firms. Abed et al. (2016) use a primary wordlist to extract forward-looking information provided by UK firms and then use secondary wordlists to classify the information into four sub-topics including finance, strategy, structure and business environment. This method is adopted in many other disclosure studies (Hussainey et al., 2003; Elzahar and Hussainey, 2012; Kravet and Muslu, 2013; Elshandidy et al., 2013; Campbell et al., 2014; Elshandidy et al., 2015; Elshandidy and Neri, 2015; Muslu et al., 2015; Allini et al., 2016; Allaya et al., 2018; Elgammal et al., 2018; Hassanein et al., 2019; Jia et al., 2019).

An important limitation of the dichotomous coding scheme is that it only captures the presence or absence of a disclosure item without considering the content of information, leading to limited capability to interpret messages conveyed by managers in narrative reporting. Moreover, the development of the disclosure checklist varies among studies as it involves researchers' subjective judgements on what disclosure items should be included or removed (Beattie, 2000). The reliability and validity of results are even more questionable in a weighted scoring scheme (Abed et al., 2016). Meanwhile, the content analysis approach allows researchers to categorise text units and consequently identify target disclosures at a higher level of details (Linsley and Shrives, 2006). Although this approach does

not completely overcome the coding subjectivity, the reliability and validity check can be done by multiple coders or automated processes.

### **3.4.2. Manual and automated textual analysis**

An extensive amount of research has focused on applying a content analysis of text information in narrative disclosures. Traditionally, textual analysis is conducted manually to measure the extent of corporate disclosure. According to El-Haj et al. (2019), the manual annotation of text is an iterative process which allows researchers to refine text features and enhances the knowledge of contexts. As text is originally produced by humans, manual text analysis is detailed, precise and tailored to a specific business context. For example, Schleifer and Walker (2010) identify the topics of forward-looking disclosure in UK firms' annual reports by reading the outlook section and coding the topic of each statement. The study further measures the disclosure tone by counting positive, negative, and neutral words for each topic. This process is led by a set of coding rules which is developed through several rounds of manual reading. Likewise, to evaluate the effectiveness of a new regulation, Johnson et al. (2001) read earnings and sales forecasts provided by US firms in the pre- and post-Act periods. The forward-looking statements are then manually classified by type of news, time horizon and specificity. Krause et al. (2017) manually code annual reports issued by German firms using a coding scheme which consults disclosure regulations, prior disclosure studies and professional bodies' guidelines to measure the extent of forward-looking information. This method is also applied in Linsley and Shrivs (2006) and Elzahar and Hussainey (2012). Although it achieves a high level of detail and customisation, the results are generally subjective due to significant human involvement. This process is so labour-intensive and time-consuming that it limits to small datasets and being widely questioned on replicability (Bednarek, 2009). Additionally, the lack of uniformity causes inherent limited generalizability in manual annotation (Li, 2010a).

Alternatively, textual analysis of corporate narrative reporting can be undertaken with the assistance of computerised programs to overcome the labour-intensiveness of manual coding and therefore potentially reach a much larger

sample of text files. In a simple way, a text mining software is employed to process and classify different text units such as words, phrases, sentences, paragraphs into different categories based on a lexicon resource, i.e. a dictionary. To extract a particular attribute of the text, researchers count the frequency of words associated with the attribute at different text levels (Guo et al., 2016). Hussainey et al. (2003) is among the first disclosure study that automates the coding process by employing the built-in text search function in Nudist software to count the frequency of forward-looking keywords in UK firms' annual reports. The search engine can detect specific words and variants of such words at different text levels. Moreover, a researcher can combine two searches to enhance the understanding of corporate disclosure. In another study, Kravet and Muslu (2013) uses a UNIX Perl code to download, extract and analyse risk disclosure in 10-K filings. The code parses the narratives in annual reports into sentences and then tags a sentence as risk-related if it contains at least one risk-related keyword. This study follows Hussainey et al. (2003)'s approach but uses a different programming system. Recent disclosure studies apply the same method to detect targeted information in a variety of corporate reporting documents (Al-Najjar and Hussainey, 2011; Elshandidy et al., 2013; Wang and Hussainey, 2013; Athanasakou and Hussainey, 2014; Campbell et al., 2014; Elshandidy et al., 2015; Elshandidy and Neri, 2015; Muslu et al., 2015; Abed et al., 2016; Elgammal et al., 2018; Hassainein et al., 2018; Elshandidy et al., 2019).

In a more sophisticated way, researchers rely on machine learning algorithms to classify texts or documents and discover statistical relationships among them. A supervised machine learning process requires the manual application of an algorithm on a training dataset before running on the whole data using a language program. For instance, Li (2010b) employs the Naïve Bayes algorithm to classify forward-looking sentences into tones and business categories with the assistance of a Perl code. In Huang and Li (2011), a multi-label text classification algorithm is employed to label texts by 25 risk factors which are previously extracted from 10-K annual reports through cross-coding. Alternatively, unsupervised machine learning methods learn underlying features of texts rather than explicitly impose categories of interest. For example, Bao and Datta (2014) use the Latent Dirichlet Allocation



statistical model to automatically summarize risk-related topics in 10-K annual reports by exploring the probability distribution over words.

The dictionary-based method in disclosure research has some advantages over the use of machine learning classifier algorithms. Firstly, counting the frequency of text units is more straightforward and easier to replicate in follow-up studies compared to the complicated process of developing algorithms. Secondly, although word counting is restricted to the availability of pre-defined dictionaries which may not be applicable to the business context, researchers can self-develop wordlists associated with specific attributes of disclosure by analysing a small sample of texts or consulting disclosure guidelines and recommendations. To capture context, such wordlists can be tested on another small sample and then adjusted to remove irrelevant text units (Abed et al., 2016). This approach has been adopted in Hussainey et al. (2003) and Muslu et al. (2015) and achieved a good level of validity and reliability. Thirdly, classifier algorithms, such as Naïve Bayes technique adopted in Li (2010b), require substantial human involvement in coding and classifying the training data to achieve validity while pre-defined wordlists have already been validated in prior studies. Despite the need of manual inspections in both approaches, the use of wordlists is less subjective and more generalisable whereas a classifier algorithm is only applicable to a given dataset.

There is a trade-off between the accuracy of measurement and the noises that computational methods may create. Loughran and McDonald (2016, p.1223) argue that the use of complex methods beyond word counting may ignore the sequence of words from which the meaning of text can be inferred and subsequently create more noises to the empirical investigation. Additionally, the application of machine learning algorithms may be irrelevant to research questions in the financial discourse as it excessively focuses on the textual structure while deviating from economic fundamentals (Li, 2010a; Loughran and McDonald, 2016). Furthermore, the methodological choice in disclosure research depends on the nature of research questions, the nature of text and the sample size.

### **3.4.3. The unit of textual analysis**

There is a debate concerning whether words or sentences should be used as the text unit of textual analysis in disclosure studies. The count of topic-related keywords has been widely used as a measure of textual disclosures in prior studies (Li, 2006, Campbell et al., 2014). However, individual words have no meaning unless they are examined under the context of a complete sentence (Bowman, 1984; Beattie et al. 2004). Milner and Alder (1999) add that sentences outperform any other text units in achieving coding reliability. Furthermore, Li (2010b) adds that paragraphs, as a bundle of sentences, may impose noises as different sentences have different tones and content. As a result, splitting documents into sentences increases the power of classification. Many recent studies retrieve keywords at the sentence level to measure disclosures (Hussainey et al., 2003; Beretta and Bozzolan, 2004; Linsley and Shrivs, 2006; Li, 2010b; Kravet and Muslu, 2013; Elshandidy et al., 2013; Wang and Hussainey, 2013; Elshandidy et al., 2015; Elshandidy and Neri, 2015; Muslu et al., 2015).

### **3.5. The impact of ownership structure on forward-looking and risk disclosure: Literature review and hypothesis development**

Ownership structure plays a pivotal role in shaping companies' attitudes and behaviours since different shareholders have different expertise and monitoring preferences (Simerly and Bass, 1998). Compared to individual investors, professional investors, such as institutions, foreign investors, and the government, are at a better position to impose their expectations on management's decision-making. They can go beyond investment decisions by voting on the company's strategies, including disclosure policies. Smith et al. (2005) add that differences in ownership structures may influence the company-stakeholder relationships and subsequently affect the level and quality of corporate disclosure. While the ownership-disclosure relation has been investigated since the 1990s in developed markets, the topic is becoming more of research interest in emerging economies in recent years. Barako et al. (2006) posit that the main drivers of voluntary disclosure in developed countries may apply in developing countries but the level of voluntary disclosure in the later remains well lower. There are three important

factors explaining this situation. Firstly, emerging countries are rapidly restructuring their capital markets and privatising SOEs to improve market transparency (Millar et al., 2005; Al-Akra et al., 2010). This encourages competition across economic sectors, leading to significant changes in corporate ownership structures. Secondly, the governments in these countries attempt to take part in multinational economic associations and forums to facilitate their collaboration with other developed countries. This helps them attract MNEs and foreign investors as well as institutions investing or opening subsidiaries in their countries. Thirdly, investors from developed economies show a tendency to divert their capital towards emerging economies in order to diversify their investment portfolios and obtain incentives offered by the host governments (Huang and Shiu, 2009, Liang et al., 2012).

### **3.5.1. Institutional ownership**

While disclosure theories underline a favourable impact of institutional ownership on the extent of disclosure, empirical results are inconclusive. A number of empirical studies report a positive association between institutional ownership and disclosure while some others find no significant results. In the US, Healy and Palepu (1999) find that greater disclosure is accompanied with increased institutional shareholdings as institutional owners have incentives to reduce the price impact of trades. Likewise, Bushee and Noe (2000) report that institutions invest in firms with high levels of disclosure to reduce monitoring costs or minimize share price volatility. More recently, Nagata and Nguyen (2017) find that domestic institutional investors in Japan require accurate information to rebalance their diversified portfolios and reallocate their funds effectively. Other studies provide supporting empirical evidence (Ajinkya et al., 2005; Laidroo, 2009). In contrast, Naser et al. (2006) find that Qatari firms exhibit a lesser extent of voluntary disclosure when institutional ownership increases. Meanwhile, other studies in European firms find no significant results as institutional shareholders' private access to internal information substitutes the need for public disclosure (Donnelly and Mulcahy, 2008; Wang and Hussainey, 2013).

In emerging markets, the extant empirical literature reveals a significant positive association between institutional ownership and disclosure. In Kenyan firms, Barako et al. (2006) suggest that institutional shareholders are associated with shareholder activism, so they have more monitoring incentives to mitigate managers' sub-optimal behaviour. Many other studies support this finding such as Chen and Jaggi (2000) in Hong Kong firms; Haniffa and Cooke (2002) in Malaysian firms; Naser et al. (2006) in Qatari firms; Laidroo (2009) in the Baltics; Ntim et al. (2012a) in South African firms; Darmari and Sodikin (2013) in Indonesian firms. The empirical background indicates that institutional owners' expertise and monitoring powers are important to strengthen corporate governance practice in emerging economies. However, few other studies do not find significant results (Al-Akra et al., 2010; Li and Zhang, 2010; Alnabsha et al., 2018). Ntim and Sobaroyen (2013), on the other hand, show that institutional owners in South Africa rely on private information channels instead of public disclosures, leading to low levels of disclosure in their investee firms.

Empirical evidence about the effect of institutional ownership on forward-looking and risk disclosure remains underexplored and mainly insignificant. Wang and Hussainey (2013) report that this ownership type is not associated with the extent of voluntary forward-looking earnings-related information in UK firms' annual reports. Similar findings are documented in Agyei-Mensah (2017) and Buerthey and Pae (2020). It is noteworthy that these findings are reported where institutional shareholdings are at high levels such as an average of 60% in the UK and 28% in Zimbabwe. With concentrated shareholdings, institutional owners may rely on more efficient and timely channels of management's communication rather than annual reports. Given the relative low level of institutional ownership in ASEAN countries as discussed in Section 2.4.4 and the dominant positive results in the existing literature, a positive association is expected between institutional ownership and forward-looking disclosure, as stated in hypothesis 1a below:

***Hypothesis 1a. There is a positive association between institutional ownership and the extent of forward-looking information disclosed by firms.***

The impact of institutional ownership on risk disclosure is more evidenced but the results are mixed. Abraham and Cox (2007) find that the impact of institutional owners on UK firms' risk disclosure depends on their investment horizon. Long-term institutions negatively influence the extent of risk disclosure as they benefit from non-public information channels while short-term institutions rely on risk information in annual report narratives to support their frequent trading strategies. Elzahar and Hussainey (2012) report that institutional investors have no significant effect on the extent of risk disclosure in UK firms' interim reports. Several studies in emerging economies confirm a positive association such as Agyei-Mensah and Buertey (2019) and Salem et al. (2019). Meanwhile, other studies find a negative effect as block shareholdings allow institutions to obtain information through direct contact with managers rather than relying on public disclosure (Ntim et al., 2013; Habtoor et al., 2019). At relative low levels of shareholdings, institutional owners in ASEAN listed firms may exhibit an active role in promoting risk disclosure, hence hypothesis 1b is developed:

***Hypothesis 1b. There is a positive association between institutional ownership and the extent of risk information disclosed by firms.***

Moreover, the cost-based theories predict that the extent of disclosure is determined by the balance between the benefits and the costs associated with disclosures. Early studies also suggest that corporate owners consider the cost-benefit trade-off to maximize their investment gains (Makhija and Patton, 2004; Laidroo, 2009). They can either extract private benefits from their power of control or seek favourable changes in share prices in the capital market. In their efforts to maximize total benefits, these driving forces may positively or negatively affect disclosure practices. This means the effect of ownership on disclosure may change with the level of shareholdings. Empirically, a non-linear effect of ownership on disclosure practices is found in Elmagrhi et al. (2016). Other studies underline that firms are less likely to disclose information when institutional owners hold a large share (Donnelly and Mulcahy, 2008; Laidroo, 2009; Hidalgo et al., 2011). Consequently, there is a good reason to further examine the non-linearity between institutional ownership and disclosure:

***Hypothesis 1c. There is a non-linear association between institutional ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 1d. There is a non-linear association between institutional ownership and the extent of risk information disclosed by firms.***

### **3.5.2. Foreign ownership**

Compared to other identities of ownership, foreign investors are less of empirical interest in developed economies. On a sample of Japanese firms, Nagata and Nguyen (2017) report a significant positive impact of foreign ownership on the quality of management forecasts, reflecting greater exposure to agency costs in foreign-owned firms. Conversely, Riaz et al. (2015) indicate that foreign ownership is significantly negatively related to voluntary disclosure in Australia. They explain that foreign-owned firms do not respond to increased demand for voluntary disclosure as quick as domestic firms because of the regulatory distance. Moreover, foreign block-holders rely on their interaction with product market in the host country to determine disclosure policies.

Most prior studies suggest that firms with foreign ownership are more likely to provide the public with greater disclosure. A majority of empirical studies agree that foreign owners have incentives to bridge the information gap between themselves and local investors to make their decision-making less risky (Haniffa and Cooke, 2002; Barako et al., 2006; Wang et al., 2008; Al-Akra et al., 2010; Liu, 2015). Other studies confirm that foreign owners' activism puts pressure on firms to address agency problems and solve them by enhanced transparency. Huafang and Jianguo (2007) indicate that Chinese firms exert greater CSR disclosure to meet their foreign owners' expectations. Likewise, Rustam et al. (2019) support that Pakistani firms with foreign ownership exhibit greater sustainability disclosure. Empirical studies also reveal that foreign-owned firms employ disclosure to distinguish themselves from domestic firms and to attract more foreign capital (Liang et al., 2012; Khan et al., 2013).

However, Bokpin et al. (2014) find that foreign shareholders in African firms do not favour disclosure due to their sensitiveness to political instability. Compared to local investors, foreign owners may be more cautious in revealing their identity under such an environment. In a more recent study, Garanina and Aray (2021) find that the country origin of foreign investors mediates the ownership-disclosure relation in Russian firms. Offshore investments from a country, with similar institutional context to the host country, may aim at tax benefits rather than long-term gains.

There are few empirical studies examining the relevance of foreign ownership to forward-looking and risk disclosures. Liu (2015) reports that firms with foreign ownership exhibit greater forward-looking disclosure following major regulatory changes in financial disclosure regulations in China. Moreover, the convergence of local accounting standards with IFRSs also facilitate the divulgence of prospective information among foreign-owned listed firms. Elgammal et al. (2018) confirm this positive effect in Qatar where foreign ownership is 28% on average. Some other studies find that highly concentrated foreign ownership reduces managers' incentives to risk disclosures. Mutual meetings may be more effective for risk communication between firms and influential foreign shareholders (Miikinen, 2012; Saggar and Singh, 2017).

Although previous empirical findings are mixed, it can be expected that foreign ownership positively influences forward-looking and risk disclosure in ASEAN firms for two reasons. First, the ASEAN governments have been making strong efforts on improving corporate informational environment during the study period, particularly risk disclosure regulations, as discussed in Section 2.5.4 of Chapter 2. These changes potentially attract more foreign investment in the local stock markets and facilitate corporate information transparency as documented in Liu (2015). Second, the negative results in few risk disclosure studies are found when foreign ownership is highly concentrated while foreign ownership in ASEAN firms is lower than other ownership types and mostly attributed to foreign institutions (De La Cruz et al., 2019). With investment experience in multiple markets, these

investors are more likely to promote disclosure practice when investing in emerging economies. Hypotheses 2a and 2b are therefore developed:

***Hypothesis 2a. There is a positive association between foreign ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 2b. There is a positive association between foreign ownership and the extent of risk information disclosed by firms.***

There might also exist a non-linear relationship between foreign ownership and corporate disclosure as monitoring power and benefits vary with levels of ownership (Makhija and Patton, 2004; Laidroo, 2009), hence:

***Hypothesis 2c. There is a non-linear association between foreign ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 2d. There is a non-linear association between foreign ownership and the extent of risk information disclosed by firms.***

### **3.5.3. Managerial ownership**

Many prior studies in developed economies show that the extent of disclosure is decreasing in managerial ownership, which is inconsistent with the agency theory. The entrenchment effect of managerial ownership overrides the interest alignment effect when managers obtain a significant shareholding (Shleifer and Vishny, 1997; Chau and Gray, 2010). When managerial ownership becomes high, managers have incentives to conceal their expropriation activities such as insider trading and risk-averse investment decisions. With sufficient voting power, managers can withhold information that is unfavourable to their compensation and job positions. Many other empirical studies provide supporting evidence when investigating the extent of voluntary disclosure (Eng and Mak, 2003; Gul and Leung, 2004; Akhtaruddin and Haron, 2010; Broberg et al., 2010; Khan et al., 2013; Haddad et al., 2015; Beekes et al., 2016).

Meanwhile, few studies find empirical evidence on the interest alignment effect of managerial ownership on disclosure in developing economies. For instance,



Agustia et al. (2018) find that managers in Indonesia are more likely to exert greater CSR disclosure when they hold shares in the company. The study, however, does not find a positive link between managerial ownership and corporate performance, suggesting that disclosure may be related impression management practice by managers. In a more recent study, Farooque et al. (2020) report that managerial ownership helps to reduce agency costs in Thai firms by aligning managers' behaviour with corporate performance. In another study of Vietnamese listed firms, Vu et al. (2018) also suggests that managerial ownership improves the concord between managers' personal interests and firm interests. Some other studies report insignificant results due to lack of management attention to disclosure during the pre-IPO period (Mak, 1991) or the availability of private information access (Donnelly and Mulcahy, 2008).

Regarding forward-looking disclosure, a strong negative result is evidenced in UK firms (Al-Najjar and Hussainey, 2011; Wang and Hussainey, 2013; Hassanein and Hussainey; 2015). This finding is explained by two reasons. First, large shareholdings enable managers to have superior access to strategic information over outside investors, so they have less incentives to reveal forward-looking information. Second, the UK accounting system provides managers with significant discretion which gives rise to the entrenchment effect reflecting their self-serving behaviour. In Chinese listed firms, Liu (2015) asserts that managers' minor shareholdings cannot help to align their interests with those of owners. Thus, they have a negligible effect on voluntary disclosure of forward-looking information which is regarded as strategic by powerful shareholders, such as the government and foreign investors. Salem et al. (2019) finds a similar result when examining risk disclosure in Tunisian firms while Habtoor et al. (2019) find no significant effect in Saudi firms. Collectively, a negative association is expected between managerial ownership and forward-looking (risk) disclosure in this thesis:

***Hypothesis 3a. There is a negative association between managerial ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 3b. There is a negative association between managerial ownership and the extent of risk information disclosed by firms.***

Furthermore, the non-linearity of the relationship is hypothesized to investigate the co-existence of alignment and entrenchment effects, suggested by agency theory and prior empirical studies (Makhija and Patton, 2004; Elmagrhi et al., 2016).

***Hypothesis 3c. There is a non-linear association between managerial ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 3d. There is a non-linear association between managerial ownership and the extent of risk information disclosed by firms.***

#### **3.5.4. Government ownership**

The government plays an important role in promoting a well-functioned capital market and establishing a healthy corporate reporting environment. Nonetheless, the theoretical discussion in Section 3.2 reveals that there is no consensus in predicting the effect of government ownership on the extent of corporate disclosure. Khlif et al. (2017) explain that conflicting theories around the consequences of state ownership in corporations derive from differences in the enforcement of country-specific regulatory systems.

Empirical results on the relation between government ownership and corporate disclosure is limited in a developed nation setting. Connelly et al. (2010) explain that the government only engages in corporate ownership where market failure happens, and such intervention is rare. Several studies in European countries report a positive association. The impact of government ownership on disclosure is significantly positive when analysing the quality of non-mandated public announcements in Estonia, Lithuania and Latvia (Laidroo, 2009). In Spain, Garde Sánchez et al. (2017) report that state-owned companies, mainly large corporations, are more likely to engage in CSR disclosure to build up a favourable public image. Similar findings are documented in Singapore which is an advanced market but having concentrated corporate ownership. The positive result is explained by the SOEs' incentives to exhibit the government's commitments to restructuring financial markets (Eng and Mak, 2003; Luo et al, 2006). Few other

studies also show positive but insignificant results (Makhija and Patton, 2004; Naser et al., 2006).

Government ownership is more of research interest in emerging economies where the government holds a significant share in corporations. A majority of prior studies provides evidence on a positive impact of government ownership on corporate disclosure. In Hong Kong firms, Ferguson et al. (2002) find that SOEs are more likely to support state-initiated disclosure policies due to their dependence on the government financial support. Increased disclosure would also create a favourable impact on future listings of post-privatised firms. Likewise, Zeng et al. (2012) find that Chinese SOEs engage in voluntary disclosure to satisfy the government and to receive continued support from it. Hu et al. (2017) further explain that the Chinese government is such a powerful and legitimate stakeholder that they can enforce their claims which earn urgent response of management. Meanwhile, Indian state-owned firms show a higher level of human resource disclosure as they are better at interpreting government disclosure regulations (Kaur et al., 2016). Supporting results are found in South Africa (Ntim et al., 2012a, b; Ntim and Sobaroyen, 2013); in Bangladesh (Khan et al., 2013) and in Jordan (Alhazaimh et al., 2014; Haddad et al., 2015). However, Al-Janadi et al. (2016) reveal a negative result in Saudi Arabia where the government heavily controls executive management in SOEs.

Government ownership is found to positively influence the extent of forward-looking disclosure in China (Qu et al., 2014) and risk disclosure in South Africa (Ntim et al., 2013) and Saudi Arabia (Habtoor et al., 2019). These studies suggest that government-owned firms have the incentive to signal their congruence with government disclosure initiatives to maintain access to critical resources. However, few other studies do not report significant results (Liu, 2015; Saggar and Singh, 2017; Elshandidy et al., 2018; Salem et al., 2019). Like other emerging markets, the governments in most ASEAN countries retain control over business activities. While the reasons for corporate engagement in disclosure can be diverse, firms with government ownership in these countries are expected to respond more actively to the government's information demand to reduce legitimacy costs and

maintain governmental financial support. This leads to the development of the following hypotheses:

***Hypothesis 4a. There is a positive association between government ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 4b. There is a positive association between government ownership and the extent of risk information disclosed by firms.***

Moreover, the non-linearity between government ownership and corporate disclosure is evidenced in several studies. Liu (2015) reports an inverted U-shaped relationship between state ownership and disclosure of forward-looking information with a turning point of 33%. This means firms have less incentives for voluntary disclosure when state ownership exceeds 33%. Elmagrhi et al., (2016) also suggest that there is a non-linear relationship between ownership variables and disclosure practices. Therefore, hypotheses 4c and 4d are developed:

***Hypothesis 4c. There is a non-linear association between government ownership and the extent of forward-looking information disclosed by firms.***

***Hypothesis 4d. There is a non-linear association between government ownership and the extent of risk information disclosed by firms.***

**Table 3.1. Summary of empirical findings about the impact of ownership types on corporate disclosure**

| Type of ownership              | Study                       | Country context | Study period                               | Type/Characteristic of disclosure examined           | Findings about The impact of ownership on disclosure |
|--------------------------------|-----------------------------|-----------------|--|--|--|
| <b>Institutional ownership</b> | Haniffa and Cooke (2002)    | Malaysia        | 1995                                       | Voluntary disclosure in annual reports               | No impact  |
|                                | Ajinkya et al. (2005)       | US              | 1994-2003                                  | Management earnings forecasts                        | Positive   |
|                                | Barako et al. (2006)        | Kenya           | 1992-2001                                  | Voluntary disclosure in annual reports               | Positive   |
|                                | Naser et al. (2006)         | Qatar           | 1999-2000                                  | Corporate social disclosure                          | No impact  |
|                                | Donnelly and Mulcahy (2008) | Ireland         | 2002                                       | Voluntary disclosure in annual reports               | No impact  |
|                                | Laidroo (2009)              | The Baltics     | 2000-2005                                  | Informativeness, relevance and precision             | Positive   |
|                                | Al-Akra et al. (2010)       | Jordan          | 1996-2004                                  | Voluntary disclosure in annual reports               | No impact  |
|                                | Hidalgo et al. (2011)       | Mexico          | 2005-2007                                  | Intellectual Capital Disclosure                      | Negative   |
|                                | Ntim et al. (2012a)         | South Africa    | 2002-2006                                  | Corporate governance disclosure                      | Positive   |
|                                | Darmadi and Sodikin (2013)  | Indonesia       | 2010                                       | Voluntary disclosure in annual reports               | Positive   |
|                                | Ntim and Sobaroyen (2013)   | South Africa    | 2003-2009                                  | Black economic empowerment disclosure                | Negative   |
|                                | Wang and Hussainey (2013)   | UK              | 1996-2007                                  | Forward-looking disclosure in annual reports         | No impact  |
|                                | Elmagrhi et al (2016)       | UK              | 2008-2013                                  | Voluntary corporate governance disclosure            | No impact  |
|                                | Hu et al. (2017)            | China           | 2010                                       | Corporate social responsibility disclosure           | No impact  |
| <b>Foreign ownership</b>       | Nagata and Nguyen (2017)    | Japan           | 2002-2015                                  | Voluntary management forecast revisions              | Positive   |
|                                | Alnabsha et al. (2018)      | Libya           | 2006-2010                                  | Mandatory and voluntary disclosure in annual reports | No impact  |
|                                | Haniffa and Cooke (2002)    | Malaysia        | 1995                                       | Voluntary disclosure in annual reports               | Positive   |
|                                | Barako et al. (2006)        | Kenya           | 1992-2001                                  | Voluntary disclosure in annual reports               | Positive   |
|                                | Huafang and Jianguo (2007)  | China           | 2002                                       | Voluntary disclosure in annual reports               | Positive   |
|                                | Wang et al. (2008)          | China           | 2005                                       | Voluntary financial disclosure                       | Positive   |
|                                | Laidroo (2009)              | The Baltics     | 2000-2005                                  | Informativeness, relevance and precision             | Negative   |
|                                | Bopkin and Isshaq (2009)    | Ghana           | 2005-2009                                  | Corporate social responsibility disclosure           | Negative   |
|                                | Al-Akra et al. (2010)       | Jordan          | 1996-2004                                  | Voluntary disclosure in annual reports               | Positive   |
|                                | Liang et al. (2012)         | Taiwan          | 2001-2005                                  | Voluntary disclosure in annual reports               | Positive   |
|                                | Khan et al. (2013)          | Bangladesh      | 2005-2009                                  | Corporate social responsibility disclosure           | Positive   |
|                                | Alhazaimeh et al. (2014)    | Jordan          | 2002-2011                                  | Voluntary disclosure in annual reports               | Positive   |
|                                | Liu (2015)                  | China           | 2008-2012                                  | Forward-looking disclosure in annual reports         | Positive   |
|                                | Hu et al. (2017)            | China           | 2010                                       | Corporate social responsibility disclosure           | Positive   |
|                                | Nagata and Nguyen (2017)    | Japan           | 2002-2015                                  | Voluntary management forecast revisions              | Positive   |
|                                | Alnabsha et al. (2018)      | Libya           | 2006-2010                                  | Mandatory and voluntary disclosure in annual reports | Non-linear   |
| Rustam et al. (2019)           | Pakistan                    | 2006-2018       | Sustainability disclosure                  | Positive   |  |
| Garanina and Array (2021)      | Russia                      | 2012-2015       | Corporate social responsibility disclosure | No impact  |  |

**Table 3.1. Continued**

|                             |                                |                    |  |  |                                |
|-----------------------------|--------------------------------|--------------------|--|--|--------------------------------|
| <b>Managerial ownership</b> | Mak (1991)                     | New Zealand        | 1983-1988  | Voluntary disclosure of forecast information           | No impact                      |
|                             | Eng and Mak (2003)             | Singapore          | 1995   | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Gul and Leung (2004)           | Hong Kong          | 1996   | Voluntary disclosure in annual reports                 | No impact                      |
|                             | Luo et al. (2006)              | Singapore          | 1994-2000  | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Huafang and Jianguo (2007)     | China              | 2002   | Voluntary disclosure in annual reports                 | No impact                      |
|                             | Donnelly and Mulcahy (2008)    | Ireland            | 2002   | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Akhratuddin and Haron (2010)   | Malaysia           | 2003   | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Broberg et al. (2010)          | Sweden             | 2002-2005  | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Khan et al. (2013)             | Bangladesh         | 2005-2009  | Corporate social responsibility disclosure             | Negative                       |
|                             | Wang and Hussainey (2013)      | UK                 | 1996-2007  | Forward-looking disclosure in annual reports           | No impact                      |
|                             | Haddad et al. (2015)           | Jordan             | 2004   | Voluntary disclosure in annual reports                 | Negative                       |
|                             | Hassanein and Hussainey (2015) | UK                 | 2005-2011  | Forward-looking disclosure in annual reports           | Negative                       |
|                             | Liu (2015)                     | China              | 2008-2012  | Forward-looking disclosure in annual reports           | Non-linear                     |
|                             | Elmagrhi et al (2016)          | UK                 | 2008-2013  | Voluntary corporate governance disclosure              | Negative/Non-linear(U-shaped)  |
|                             | <b>Government ownership</b>    | Kaur et al. (2016) | India  | 2010-2011  | Human resource disclosure      |
| Agustia et al. (2018)       |                                | Indonesia          | 2013-2015  | Corporate social responsibility disclosure             | Positive                       |
| Alnabsha et al. (2018)      |                                | Libya              | 2006-2010  | Mandatory and voluntary disclosure in annual reports   | Non-linear                     |
| Ferguson et al. (2002)      |                                | China              | 1995/1996  | Voluntary disclosure in annual reports                 | Positive                       |
| Eng and Mak (2003)          |                                | Singapore          | 1995   | Voluntary disclosure in annual reports                 | Positive                       |
| Luo et al. (2006)           |                                | Singapore          | 1994-2000  | Voluntary disclosure in annual reports                 | Negative                       |
| Naser et al. (2006)         |                                | Qatar              | 1999-2000  | Corporate social disclosure                            | No impact                      |
| Huafang and Jianguo (2007)  |                                | China              | 2002   | Voluntary disclosure in annual reports                 | No impact                      |
| Wang et al. (2008)          |                                | China              | 2005   | Voluntary financial disclosure                         | Positive                       |
| Laidroo (2009)              |                                | The Baltics        | 2000-2005  | Informativeness, relevance and precision of disclosure | Positive                       |
| Al-Akra et al. (2010)       |                                | Jordan             | 1996-2004  | Voluntary disclosure in annual reports                 | No impact                      |
| Li and Zhang (2010)         |                                | China              | 2008   | Corporate social responsibility disclosure             | Positive                       |
| Ntim et al. (2012a)         |                                | South Africa       | 2002-2006  | Corporate governance disclosure                        | Positive                       |
| Zeng et al. (2012)          |                                | China              | 2006-2008  | Voluntary disclosure of environmental information      | Positive                       |
| Ntim and Sobaroyen (2013)   |                                | South Africa       | 2003-2009  | Black economic empowerment disclosure                  | Positive                       |
| Alhazaimah et al. (2014)    |                                | Jordan             | 2002-2011  | Voluntary disclosure in annual reports                 | Positive                       |
| Haddad et al. (2015)        |                                | Jordan             | 2004   | Voluntary disclosure in annual reports                 | Positive                       |
| Liu (2015)                  |                                | China              | 2008-2012  | Forward-looking disclosure in annual reports           | Non-linear (inverted U-shaped) |
| Al-Janadi et al. (2016)     |                                | Saudi Arabia       | 2006-2007  | Voluntary disclosure in annual reports                 | Negative                       |
| Kaur et al. (2016)          |                                | India              | 2010-2011  | Human resource disclosure                              | Positive                       |
| Garde Sánchez et al. (2017) | Spain                          | 2015               | Corporate social responsibility disclosure           | No impact  |                                |
| Hu et al. (2017)            | China                          | 2010               | Corporate social responsibility disclosure           | Positive   |                                |
| Alnabsha et al. (2018)      | Libya                          | 2006-2010          | Mandatory and voluntary disclosure in annual reports | No impact  |                                |

### **3.6. Stock market implications of forward-looking and risk disclosure: Literature review and hypothesis development**

#### **3.6.1. Theoretical predictions on stock market implications of disclosure**

The extant theoretical literature indicates that information disclosure has a favourable effect on information asymmetry. When firms issue more informative disclosures, the gap between informed and uninformed investors is narrower; in other words, information asymmetry is reduced (Diamond, 1985; Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). With better access to information, uninformed investors are less likely to raise the discount rate to protect themselves from potential losses when trading with informed investors. At the same time, fewer investors can get access to private information to earn abnormal returns or it is more costly to do so. Collectively, equal access to information makes it easier for investors to execute stock trades at reasonable costs (Heflin et al., 2005).

Leuz and Verrecchia (2000) demonstrate the benefits involved with better information by the adverse selection problem described in economic theory. While firms are more likely to withhold information that can negatively affect share prices, investors may ask for a discount to protect themselves from overvaluing the shares. The discount represents transaction cost which reduces the issuing firms' proceeds. Therefore, the sellers of shares are motivated to share value relevant information with the hope that shares are priced at their true value. The existence of adverse selection problem implies that asymmetric information among investors make the shares less liquid (Kyle, 1985; Glosten and Milgrom, 1985). Conversely, greater disclosure should reduce transaction costs or increase market demand on stocks, subsequently enhance stock liquidity.

Another strand of theoretical research explains the market impact of disclosure through its effect on systematic risk of stocks (Barry and Brown, 1985; Clarkson et al., 1996). It is explained that disclosure changes investors' perception of systematic risk. Investors increase their expected returns on stocks with low information to compensate potential losses on information risk. Inversely, they

attribute low systematic risks to stocks with high information because they are less uncertain about future returns.

The theoretical model developed in Daniel et al. (1998) suggests that stock returns are predictable due to investors' overconfidence and psychological biases. Investors are likely to overweigh their private information and underreact to public sources such as analysts' forecasts and reports. The result predictability is stronger when information is highly asymmetric as investors are more overconfident with their own judgements. One possible result is that stocks are overpriced following good news and under-priced following bad news. Moreover, Chan et al. (1996) add that stock price response to information is slower when information uncertainty is high.

As a firm's underlying earnings is intrinsically uncertain, investors' estimation of the firm value varies accordingly, leading to the volatility of stock returns. According to Verrecchia (1983), the variance of firm value is lower when more precise information is provided because investors face less uncertainty in evaluating the firm's earnings. Other early disclosure studies also posit that firms benefit from providing frequent informative disclosures by reducing the magnitude of earnings surprises and subsequently making stock prices less volatile (Lang and Lundholm, 1993; Healy et al., 1999).

Other theoretical models also predict that investors learn about the distribution and variation of a firm' future earnings over time and their earnings estimates are adjusted according to the availability of information (Lewellen and Shaken, 2002; Pástor and Veronesi, 2003). When the frequency of earnings disclosure is high, investors are more confident with their expectations; hence, disclosure reduces return volatility. Likewise, Lambert et al. (2007) theorize that the covariance of a firm's cash flows with other firms' cash flows decreases when new disclosures are provided with more precision. As precise information makes investors less uncertain about the firm's cash flows, their valuations are more likely to achieve commonality.



The theoretical literature, however, underlines that disclosure adversely causes greater uncertainty if it is not credible and timely. This means only good signals sent by firms are effective in reducing information risks. Moreover, disclosure of unexpected earnings news may lead to greater return volatility as investors expect to see more earnings surprises in the future. The effect of disclosure on stock return volatility can also be explained by either convergence or divergence arguments. Kravet and Muslu (2013) explain that stock return volatility increases following the disclosure of unknown risks as investors become more divergent in their predictions of firm value. Conversely, stock returns are less volatile if risk disclosure resolves known risks as investors are more likely to converge in their predictions.

To sum up, theoretical assumptions dominantly predict lower information asymmetry associated with increased disclosure. Market participants benefit from lower uncertainty, lower transaction costs and less information risks. Stocks are more accurately priced and there is less variation in investors' estimations of firm value. Ultimately, it can be theoretically expected that greater disclosure leads to higher and less volatile stock returns and greater stock liquidity.

### **3.6.2. Empirical literature review and hypothesis development**

#### **3.6.2.1. The effect of forward-looking and risk disclosure on stock returns**

The extant literature shows that corporate disclosure enhances stock returns and reduces expected returns. Jiao (2011) reports positive stock returns for firms with high disclosure rankings, suggesting that more transparent firms are rewarded by market participants. Using a sample of Greek firms, Alexakis et al. (2010) find that financial reporting helps investors to predict and revise their estimated returns on stocks. Nevertheless, Alsahlawi et al. (2021) find a negative association between environmental sustainability disclosure and stock returns among Saudi listed firms, suggesting that this type of information is not considered as value-relevant by market participants. According to this study, there is a lack of policy considerations about corporate sustainability practice so sustainable firms are not adequately

valued. Moreover, in a developing market, voluntary disclosure does not receive investors' attention as it contains vast amount of non-verifiable information.

Instead of stock returns, other studies use abnormal returns as a measure for the value relevance of information. The market tends to react to the information disclosed by firms that forms or revises investors' perceptions of firm value. For example, Price et al. (2012) reveals that the net tone of earnings conference calls provided by US firms is positively associated with abnormal returns within 60 days after the announcement date. In another study, Brown and Kim (1993) find that frequent earnings announcements do not generate positive abnormal returns unless they are accompanied with non-earnings news, suggesting that investors' expectations are influenced by unexpected news which complements routine earnings releases. The study adds that small firms, which are less publicly visible than large firms, are more associated with positive abnormal returns following their announcements. Christensen et al. (2004) find supporting evidence that abnormal returns on earnings announcements are negatively associated with pre-disclosure public information impounded in stock prices. This means disclosures that do not carry new information are not value relevant. More recently, Liesen et al. (2017) report that companies reporting carbon emissions in line with professional bodies' guidelines generate more positive abnormal returns than those that do not. This means carbon disclosure is priced by the market and stocks with high carbon disclosure provide higher returns relative to the market average. Moreover, the study suggests that the market needs clear signals, such as specific and verifiable information, in adjusting the level of information uncertainty.

Prior studies suggest that forward-looking information is useful for decision-making as it enhances the investors' capability to evaluate future cash flows and predict future earnings. Clement et al. (2003) find that the voluntary issuance of confirming forecasts by management in US firms generates positive abnormal returns on the release date. This type of voluntary disclosure reduces uncertainty and hence reduces the discount rate used by investors to value future earnings. In addition, more precise earnings statements, such as point estimates, create more positive returns than those containing range estimates or qualitative statements. In the UK

business setting, Hussainey and Mouseli (2010) find that stock returns are significantly explained by the quality of forward-looking earnings-related disclosure. The study implies that market participants acknowledge the levels of disclosure quality intensity exhibited by firms and consequently value the firms' stocks more accurately. As a result, firms with better disclosure quality are more likely to provide positive abnormal returns. Meanwhile, Cen et al. (2013) find lower abnormal stock returns for firms with less earnings surprises which is proxied by the difference between forecast earnings and the industry median. This indicates that investors are less likely to revise their estimations following earnings forecasts that contain limited new information. The study reports stronger results when the industry earnings median is more stable and market participants are less sophisticated. Given the strong reliance on annual reports for corporate communication in the ASEAN, it can be expected that forward-looking disclosure enhances stock returns, as stated in hypothesis 5a:

***Hypothesis 5a. There is a positive association between forward-looking disclosure and stock returns.***

Few other studies indicate that the positive and negative tone of forward-looking disclosure have different implications on the stock market. For example, Zhang (2006) provides evidence that greater information uncertainty leads to higher future returns following good news and lower future returns following bad news. This means investors are more likely to underreact to corporate information when the market implications of disclosure are ambiguous. Hutton et al. (2003) find that stock prices only respond to bad news in management's earnings forecasts, suggesting that pessimistic future disclosures are inherently more credible than optimistic ones. Consequently, managers have low incentives to convince investors of the veracity of a bad news forecast. The study suggests that investors only consider good news forecasts that are accompanied by verifiable forward-looking statements such as specific forecasts of sales or other earnings-related metrics like cash flows and margins. Likewise, Chen et al. (2022) report positive (negative) stock returns when firms issue earnings forecasts which are consistent with an increase (decrease) in EPS in the current term. Pessimistic or optimistic

forecasts that are not consistent with EPS changes are classified as noisy sentiments which are not value relevant. The above results suggest that the positive (negative) tone of forward-looking disclosure is expected to positively (negatively) influence stock returns, hence the following hypotheses are formulated:

***Hypothesis 5b. There is a positive association between positive forward-looking disclosure and stock returns.***

***Hypothesis 5c. There is a negative association between negative forward-looking disclosure and stock returns.***

Regarding risk disclosure, Wasiuzzaman et al. (2018) find that the disclosure of risk factors by Malaysian listed firms is informative to both risk-averse and risk-taking investors who consider investing in IPO stocks and consequently improves their initial returns. Risk-averse investors react to low-risk disclosure by reducing their required premium as they attempt to minimize uncertainty. Meanwhile, risk-taking investors seek high initial returns in the short term so they are more likely to increase their investment in stocks with high-risk disclosure. In another study, Filzen (2015) find that firms with quarterly risk factor updates in 10-Q filings have lower abnormal returns compared to those without the updates. Managers have the incentive to update investors of the risks that increase the possibility of negative outcomes facing the firm to reduce litigation costs of non-disclosure. Investors consequently incorporate the increased uncertainty in their estimations of firm value, leading to lower abnormal returns. The above discussion reveals that risk disclosure positively influences investors' perceptions of firms' underlying risks as predicted in hypothesis 6a:

***Hypothesis 6a. There is a negative association between risk disclosure and stock returns.***

Considering the tone of risk disclosure, Nagel et al. (2021) find that investors price both positive and negative risk disclosures in 10-K forms. While investors trading on negative risk news are less likely to earn excess returns, positive risk news increases short-term abnormal stock returns earned by informed traders. Although

risk disclosure is informative to investors, the study finds further evidence that opportunistic firms have incentives to obscure bad news by a vague language and consequently inflate the overall positive tone. In response, market participants rationally analyse the language that firms use to communicate risk factors to avoid missing important information or being misled by firms.

Several recent studies in UK firms reveal that negative risk disclosures are significantly associated with abnormal returns while general risk disclosures are not value relevant (Hassanein et al., 2021; Hassanein and Elsayed, 2021; Hassanein, 2022). As managers have incentives to disclose negative risk news to avoid the legal claim on their concealment of value relevant information, unfavourable risk disclosure is more likely to contain high information content and hence influences investors' risk perceptions than favourable risk information. As a result, these studies report that the dissemination of negative risk information deteriorates abnormal returns. In Hassanein (2022), there is also evidence that positive risk disclosures increase abnormal returns but the result is only observed for firms in low competition industries, suggesting that firms are constrained by proprietary costs when disseminating risk information. Collectively, the discussion suggests that positive (negative) risk disclosures have a positive (negative) effect on stock returns. Consequently, hypotheses 6b and 6c are developed:

***Hypothesis 6b. There is a positive association between positive risk disclosure and stock returns.***

***Hypothesis 6c. There is a negative association between negative risk disclosure and stock returns.***

### **3.6.2.2. The effect of forward-looking and risk disclosure on stock volatility**

Another stock market implication of disclosure is its impact on the level of uncertainty faced by investors. While stock returns reflect changes in post-disclosure stock prices, stock volatility refers to investors' divergence in their expectations of future value. Empirical studies reveal that corporate disclosure can either increase or decrease return volatility, depending on the content, the quality and the frequency of disclosure.

Some recent studies report that informative disclosures reduce stock return volatility. For example, Mousa and Elamir (2018) find that improved disclosure quantity, quality and coverage reduce stock return volatility in Bahrain listed firms. Yang (2020) reveals that increased CSR disclosure by listed firms in Shanghai and Shenzhen leads to lower stock return volatility. Improved CSR disclosure helps investors better understand a firm's commitments in social responsibilities which lowers the uncertainty of future performance and enhance investors' confidence to hold stocks for a long term. Likewise, Comier et al. (2011) report lower stock price volatility following voluntary CSR disclosures but market reactions are reverse when disclosure exceeds a maximum, implying that investors perceive excessive information as irrelevant and outdated.

Meanwhile, the impact of CSR disclosure on stock return volatility is inconclusive in Chinese listed firms (Xu and Liu, 2018). The findings reveal that post-disclosure stock returns are less volatile first but then starting to vary. It is explained that voluntary CSR information is hard to verify by investors, leading to higher uncertainty. Moreover, the variation of investors' stock valuations implies that not all investors value CSR information. They may consider it as unimportant or supplementary. This finding is inconsistent with Yang (2020) and suggests that good disclosure practice by firms in a developing stock market may be under-priced due to inadequate policy-makers' and investors' attention.

Empirical studies suggest that forward-looking disclosure reduces stock return volatility. Bravo (2016) finds a negative association between financial forward-looking information voluntarily provided by US firms in their annual reports and stock return volatility. Regardless of firm-level characteristics, stock returns of high disclosure firms are less volatile than low disclosure firms. The study affirms that firms can strategically use forward-looking disclosure to minimise stock return volatility. In addition, forward-looking disclosure of reputable firms are more credible and consequently more effective in reducing stock volatility. Similar findings are reported in UK firms (Hussainey and Mouselli, 2010) and Bahraini firms (Mousa and Elamir, 2018), hence hypothesis 7a is developed:

***Hypothesis 7a. There is a negative association between forward-looking disclosure and stock return volatility.***

The literature suggests that the tone of forward-looking disclosure also influences stock return volatility. Borochin et al. (2018) find that the positivity of conference calls reduces information uncertainty while the negativity increases it. When examining the tone of MD&A forward-looking statements, Li (2010b) finds that the aggregate tone, as measured by the positive-negative sentiment difference, is positively associated with future earnings and liquidity. This result is consistent with the finding in Borochin et al. (2018) that increased optimism makes stock prices less volatile. Additionally, several studies report that investors respond more strongly to bad news than good news because bad news is more costly and credible whereas good news is associated with management's bias (Hutton et al., 2003; Kothari et al., 2009; Rogers et al. 2009; Baginski et al., 2014; Arslan-Ayaydin et al., 2016; Malaquias and Junior, 2021).

The above findings are reported for frequent communication channels such as management earnings forecasts, conference calls or press releases and mainly in the US context while the value relevance of annual report narratives in non-US contexts remain underexplored. Despite being a less timely communication channel, forward-looking information in annual report narratives attracts investors' interest as it covers diverse topics, including both earnings and non-earnings information, both verifiable and non-verifiable information (Kothari et al., 2009; Al-Najjar and Abed, 2014). In addition, managers may not adopt the same tone across different communication channels so the analysis of annual report narratives potentially provide new insights (Bassyouny et al., 2022). Given a strong reliance on annual reports for corporate communication in ASEAN countries, this thesis aims to examine the effect of both positive and negative tones on stock return volatility, as stated in the following hypotheses:

***Hypothesis 7b. There is a negative association between positive forward-looking disclosure and stock return volatility.***

***Hypothesis 7c. There is a positive association between negative forward-looking disclosure and stock return volatility.***

On the other hand, prior studies show that risk disclosure affects investors' risk perceptions and therefore influences the variations of stock returns. Kravet and Muslu (2013) find that stock return volatility increases following the disclosure of unknown risks but decreases following the disclosure of known risks. Investors interpret information about new risks as a sign of greater uncertainty which subsequently reduces their confidence in estimating future earnings and increases the range of their predictions. Conversely, they are less uncertain about the variance of future cash flows when risk disclosure reassures them of successful management of known risks. Several recent studies confirm this finding (Elsayed and Elshandidy, 2021; Elshandidy and Zeng, 2022). In another study, Beatty et al. (2019) report that investors become divergent in their predictions following discontinued or new risk disclosures while market reactions to repeated disclosures are trivial. Meanwhile, Campbell et al. (2014) suggest that investors' reactions to risk disclosure depend on the ability to eliminate the informed risks through diversification. Non-diversifiable risks are associated with greater uncertainty of expected future cash flows so investors will diverge in their predictions, indicating a higher post-disclosure stock return volatility. Meanwhile, more information about diversifiable risks reassures investors of their ability to balance current portfolio positions and consequently reduce the information difference among them, indicating by a lower post-disclosure stock return volatility. In another study, Bao and Datta (2014) find that forward-looking statements about risk factors facing US firms increase investors' risk perceptions while the provision of different risk factors are mainly uninformative. Although empirical results are mixed, the literature indicates that the informativeness of risk information can be observed through stock return volatility, hence, hypothesis 8a is developed:

***Hypothesis 8a. There is an association between risk disclosure and stock return volatility.***

Furthermore, empirical research shows that market reactions to risk disclosure vary with tone. The tone of disclosure is not intertwined with the amount of



disclosure because it captures what is disclosed while the latter captures how much is disclosed (Li, 2010a, b). Li et al. (2019) find that the tone of risk disclosure in Chinese firms' annual reports has opposite effects on stock volatility. As risk information is more likely to bring panic to investors than general disclosures, positive risk information weakens investors' panic beliefs, reduces their irrational consciousness, and therefore reduces the variation of their predictions. In opposite, when risk disclosure is more negative, investors are more panic and irrationally biased in their evaluation of firm fundamentals, making their investment decisions less efficient. Elshandidy and Zeng (2022) report similar findings but have a different explanation. A positive tone is usually used by managers to discuss risk identification, management, and outcomes, making investors less uncertain about the variance of future cash flows. Meanwhile, a negative tone is more associated with manager's discussion of unfavourable possibilities without specific mitigation attempts, indicating greater uncertainty. Hassanein (2022) add that investors are more concerned about negative news than positive news so their reactions to unfavourable risk information are stronger. For firms facing high proprietary costs, positive risk disclosure mainly contains boilerplate information, indicating a sign of impression management. Collectively, the literature suggests that investors interpret the tone of risk disclosure to revise their ex-ante beliefs about a firm's risk. Hypotheses 8b and 8c are thus formulated:

***Hypothesis 8b. There is a negative association between positive risk disclosure and stock return volatility.***

***Hypothesis 8c. There is a positive association between negative risk disclosure and stock return volatility.***

### **3.6.2.3. The effect of disclosure on stock liquidity**

Empirical literature indicates that communicating information help managers reduce information asymmetry and subsequently improve stock liquidity. The effect of corporate disclosure on stock liquidity can be observed through two mechanisms. Firstly, increased disclosure makes a firm more attractive to large investors, leading to higher stock demand and more frequent trading activities and

eventually tighter bid-ask spreads (Diamond and Verrecchia, 1991; Leuz and Verrecchia, 2000). Secondly, informative disclosures induce market participants to trade with confidence and settle at a fair price more quickly and easily. Empirical evidence indicates that disclosures with good quality and specificity or voluntary disclosures, such as environmental information, support investors to estimate firm value more accurately (Balakrishnan et al., 2014; Elshandidy and Neri, 2015; Akrouf and Othman, 2016; Schoenfeld, 2017). The effect of disclosure on liquidity is stronger when firms exhibit their commitments to continued disclosure in the future.

Conversely, firms adopting earnings management or low disclosure quality are associated with illiquidity as market participants avoid trading stocks with ambiguous earnings information (Ascioglu et al., 2012). This implies that stock liquidity deteriorates if there is lack of information or high uncertainty about the accuracy and creditability of disclosure. Xu and Liu (2018) also find a positive disclosure-liquidity association in Chinese listed firms but the effect is not unidirectional. Stock liquidity increases first and then decreases after CSR disclosure. Investors' reactions to this disclosure are strong in the two post-disclosure periods but then become weaker and vanish. The authors explain that investors are more rational when trading with voluntary non-financial information, which is mainly non-verifiable, and they are less likely to rely on this type of information in the long term. The study also suggests that mandatory disclosure is more likely to attract investors' attention in developing markets, compared to voluntary disclosure.

Prior research points out that the disclosure forward-looking information is useful for investors' decision-making, hence positively affects stock liquidity. Balakrishnan et al. (2014) find evidence that the dissemination of prospective information about firm performance improves disclosure liquidity as it enables investors to learn more about key drivers of a firm's future cash flows, especially when information asymmetry is high after a coverage shock. Similarly, Hassanein et al. (2019) report that forward-looking information in UK firms' narrative disclosures help investors determine their expectations of future cash flows and hence reduce their required

rate of return, indicating lower liquidity costs. Furthermore, controlling shareholders or managers are less likely to benefit from their private access to information when more forward-looking information is available to small shareholders and potential investors. The resulting lower information asymmetry encourages investors to make decisions on buying or selling stocks more quickly, leading to greater liquidity. The discussion leads to an expectation that forward-looking information disclosure is positively associated with stock liquidity, as stated in hypothesis 9 below:

***Hypothesis 9. There is a positive association between forward-looking disclosure and stock liquidity.***

Besides, risk disclosure also affects stock liquidity through its effect on investors' risk perceptions and consequently their assessments of the risks facing a firm. Campbell et al. (2014) report that risk disclosure reduces information asymmetry among the same firm's shareholders, as observed through lower bid-ask spreads. Elshandidy and Neri (2015) confirm that high levels of risk disclosure reduce the information advantage of majority shareholders and thereby mitigate information discrepancies among market participants. Lower information costs induce investors to trade more greater confidence, leading to increased liquidity. While making similar claims, Elshandidy et al. (2018) add that the introduction of risk reporting regulations improves the informativeness of risk disclosures as observed through enhanced liquidity. The value relevance of risk disclosure stems from firms' attempt to avoid litigation costs associated with non-disclosure or to mitigate post-crisis market volatility. More recently, Hail et al. (2021) find that information about past foreign exchange risk enables investors to predict future unexpected news and reduce their uncertainty when stock market is volatile. Investors are therefore looking at buying and selling stocks with value relevant risk information to avoid or minimize potential losses. Collectively, the above discussion leads to the development of the following hypothesis:

***Hypothesis 10. There is a positive association between risk disclosure and stock liquidity.***

**Table 3.2. Summary of empirical findings about the impact of corporate disclosure on the stock market**

| Stock market measure           | Study                        | Country context    | Study period                                | Type/characteristic of disclosure                   | Findings about the impact of disclosure  |
|--------------------------------|------------------------------|--------------------|---|---|--|
| <b>Stock returns</b>           | Clement et al. (2003)        | US                 | 1993-1997                                   | Voluntary confirming earnings forecasts             | Positive                                 |
|                                | Alexakis et al. (2010)       | Greece             | 1993-2006                                   | Financial statement information                     | Positive                                 |
|                                | Alsahlawi et al (2021)       | Saudi Arabia       | 2015-2019                                   | Environmental sustainability disclosure             | Negative                                 |
|                                | Chen et al. (2022)           | China              | 2004-2017                                   | Good (bad) news in financial disclosure             | Positive (negative)                      |
| <b>Abnormal returns</b>        | Brown and Kim (1993)         | US                 | 1982-1987                                   | Non-earnings disclosure                             | Positive                                 |
|                                | Hussainey and Mouseli (2010) | UK                 | 1996-2002                                   | Earnings related forward-looking disclosure         | Positive                                 |
|                                | Price et al. (2012)          | US                 | 1974-1986                                   | The net tone of quarterly earnings conference calls | Positive                                 |
|                                | Campbell et al. (2014)       | US                 | 2005-2008                                   | Risk factor disclosure                              | Negative                                 |
|                                | Filzen (2015)                | US                 | 2006  | Quarterly risk factor disclosure                    | Negative                                 |
|                                | Liesen et al. (2017)         | Europe             | 2005-2009                                   | Carbon disclosure                                   | Positive                                 |
|                                | Wasiuzzaman et al. (2018)    | Malaysia           | 2009-2013                                   | IPO Risk factor disclosure                          | Positive                                 |
|                                | Nagel et al. (2021)          | US                 | 2011-2017                                   | The positive tone of risk disclosure                | Positive                                 |
|                                | Hassanein et al. (2021)      | Global             | 2019  | Financial firm tweets                               | Good news-positive/<br>Bad news-negative |
| Hassanein (2022)               | UK                           | 2010-2015          | Risk disclosure in annual report narratives | Negative  |  |
| <b>Stock return volatility</b> | Li (2006)                    | US                 | 1994-2005                                   | Disclosure of unknown risks in annual reports       | Positive                                 |
|                                | Kothari et al. (2009)        | US                 | 1996-2001                                   | The tone of Management and Discussion Analysis      | Good news-negative/<br>Bad news-positive |
|                                | Rogers et al. (2009)         | US                 | 1996-2006                                   | Unfavourable/sporadic earnings forecasts            | Positive                                 |
|                                | Cormier et al. (2011)        | Canada             | 2005  | Corporate social responsibility disclosure          | Negative                                 |
|                                | Kravet and Muslu (2013)      | US                 | 1994-2007                                   | Disclosure of unknown risks in annual reports       | Positive                                 |
|                                | Bao and Datta (2014)         | US                 | 2006-2010                                   | Forward-looking risk factor disclosure              | Positive                                 |
|                                | Campbell et al (2014)        | US                 | 2005-2008                                   | Risk factor disclosure                              | Positive                                 |
|                                | Bravo (2016)                 | US                 | 2009  | Forward-looking disclosure                          | Negative                                 |
|                                | Mousa and Elamir (2018)      | Bahrain            | 2014-2017                                   | Forward-looking disclosure                          | Negative                                 |
|                                | Xu and Liu (2018)            | China              | 2009-2011                                   | Corporate social responsibility disclosure          | No impact                                |
|                                | Beatty et al (2019)          | US                 | 2005-2014                                   | Discontinued/new risk disclosures                   | Positive                                 |
|                                | Li et al (2019)              | China              | 2007-2014                                   | The tone of risk disclosure                         | Good news-negative/<br>Bad news-positive |
|                                | Yang (2020)                  | Shanghai, Shenzhen | 2015-2019                                   | Corporate social responsibility disclosure          | Negative                                 |
|                                | Malaquias and Junior (2021)  | Brazil             | 2010-2019                                   | The positive tone of management reports             | No impact                                |
| Elshandidy and Zeng (2022)     | UK                           | 2005-2013          | Disclosure of unknown risks                 | Positive  |  |

**Table 3.2. Continued**

|                               |                            |                          |                                      |   |          |
|-------------------------------|----------------------------|--------------------------|--------------------------------------|---|----------|
| <b>Stock liquidity</b>        | Leuz and Verrecchia (2000) | Germany                  | 1997-1998                            | Financial reporting                         | Positive |
|                               | Balakrishnan et al. (2014) | US                       | 1999-2009                            | Earnings forecasts                          | Positive |
|                               | Campbell et al. (2014)     | US                       | 2005-2008                            | Risk factor disclosure                      | Positive |
|                               | Elshandidy and Neri (2015) | UK, Italia               | 2005-2010                            | Voluntary risk disclosure in annual reports | Positive |
|                               | Akrout and Othman (2016)   | Middle East/North Africa | 2010-2012                            | Environmental disclosure                    | Positive |
|                               | Schoenfeld (2017)          | US                       | 1996-2010                            | Management earnings guidance                | Positive |
|                               | Elshandidy et al. (2018)   | China                    | 2013-2015                            | Risk disclosure in annual report narratives | Positive |
|                               | Xu and Liu (2018)          | China                    | 2009-2011                            | Corporate social responsibility disclosure  | Positive |
|                               | Cho and Kim (2021)         | US                       | 2004-2014                            | The positive tone of voluntary disclosure   | Positive |
|                               | Hail et al. (2021)         | Switzerland              | 2014-2015                            | Post-Swiss franc shock risk disclosure      | Positive |
| Elsayed and Elshandidy (2021) | US                         | 2004-2006                | The positive tone of risk disclosure | Positive                                    |          |

### **3.7. Summary**

In this chapter, theories and prior empirical studies are discussed to infer the possible effect of ownership structure on information disclosure by listed firms in ASEAN countries. The theoretical background suggests that managers' incentives for information disclosure can be explained by different schools of thoughts and from different theoretical aspects. While firms are motivated to increase disclosure to mitigate agency problems, to satisfy stakeholders or to reduce litigation and financing costs, they may not disclose information that is associated with high proprietary costs or to avoid adverse stock market reactions. The literature review also suggests that corporate ownership influences the extent of forward-looking and risk disclosure. The impact of ownership identity on information disclosure depends on the shareholder's expertise, investment objectives and horizon. In this chapter, the relevance of four ownership identities, including institutions, governments, foreign investors and managers, to corporate disclosure has been discussed, both theoretically and empirically. Furthermore, the chapter extends to review how the stock market reacts to forward-looking and risk information disclosed by firms. Generally, market participants benefit from increased disclosure in terms of lower information uncertainty, leading to higher stock returns, lower stock volatility and enhanced stock liquidity. Market implications of disclosure also depend on the tone of disclosure. Based on the literature review, hypotheses are developed to answer the research questions specified in Chapter 1.

## **CHAPTER 4: DATA COLLECTION AND RESEARCH METHODS**

### **4.1. Introduction**

This chapter discusses the research approach and research methodology applied to achieve the research objectives and thereby answer the research questions specified in Chapter 1. Based on the proposed methodological framework, the collection of data and the choice of quantitative research techniques are justified. As the thesis focuses on the extent of disclosure in annual report narratives of ASEAN listed companies, this chapter describes all the steps involved with pre-processing the text data in annual reports, the development of forward-looking and risk-related wordlists and the automated content analysis conducted in QSR NVivo 12 software. The chapter also specifies the sources from which other corporate data is collected. Regression models are then developed to test the hypotheses developed in Chapter 3. This chapter is structured into five sections. Section 4.2 discusses the choice of the research paradigm, research approach and methods applied in this thesis. Section 4.3 discusses the collection of the secondary data from ASEAN listed firms' annual reports, ownership data and other financial data. Section 4.4 discusses about the measurement of forward-looking and risk disclosure in ASEAN listed firms' annual reports, and the measurement of stock variables to examine the value relevance of disclosure. Section 4.5 describes the independent variables and control variables employed in the regressions. Finally, Section 4.6 explains the econometric modelling techniques applied to discover the causality between ownership and disclosure, and between disclosure and the stock market.

## **4.2. Research paradigm, research approach and research methods applied in this study**

### **4.2.1. The two research paradigms**

A research paradigm is a belief system that guides us how to carry out research. According to Collis and Hussey (2014), it is a philosophical framework that defines a scientific discipline determining the researcher's choice of research methodology. It is stated by Kuhn (1962) that researchers are expected to tranquilly work within a box of the ruling paradigm which is moulded by the underlying assumptions. As people observe and perceive the social world differently, they have different assumptions regarding their research, leading to the construction of two main research paradigms (Collis and Hussey, 2014, p.43-44).

According to the positivist paradigm, the social world around us have existence and meaning which are independent of our consciousness of them. The role of a positivist investigator is to examine the purely objective meanings in the research object through his external observation. Johnson and Duberley (2000, p.40) state that this type of research looks for fundamental laws that govern the way in which organisations operate.

As the reality is objectively given, the positivist approach epistemologically assumes that knowledge is valid only if it can be scientifically verified. Consequently, methods and techniques used in natural sciences appear to form the most appropriate methodological framework to explain the social reality. A positivist researcher is likely to assure that any concepts used in the research can be operationalised and described in a measurable way. Thus, he employs quantitative data which is collected in a strictly controlled and structured manner to make the results value free. By doing so, the researcher cannot manipulate the results which should reflect the objective nature of the research object (Guba and Lincoln, 1994). Additionally, during this process, it is crucial that the researcher remains detached from the research object to eliminate the impact of personal experience on the finding interpretation. To make the results generalisable, large samples are more likely to be used in positivist research.



As opposed to positivism, interpretivism ontologically assumes that the world is subjective and socially constructed. Everyone has his/her own sense of reality, resulting in multiple realities in existence (Hudson and Ozanne, 1988). This leads an interpretivist inquirer to epistemologically assume that true knowledge derives from human experience and the researcher needs to closely interact with the phenomenon to develop theories. While positivism is constrained by facts, interpretivism assumes that facts are mainly driven by human interests (Smith, 1983, p.10-11). In philosophy, this paradigm is closely connected to constructivism and phenomenology.

Different methods are designed to obtain different perceptions of participants regarding a phenomenon. This means an interpretivist researcher seeks to understand people's experience rather than externally explain causality. As a result, the methodological approach is personal and flexible, in the contrary to the rigid structure adopted by a positivist. Easterby-Smith et al. (2015) state that this type of paradigm gathers rich qualitative data by means of humanistic qualitative methods such as unstructured interviews and participant observation. Due to the subjective nature of research, it is unavoidable that interpretivist research is questioned about the reliability and representativeness of data.

#### **4.2.2. The research paradigm and methodology applied in this study**

According to Paterson et al. (2016), accounting and finance falls into the domain of social sciences rather than natural science disciplines. Similar to management research, this field of research has not developed a single-paradigm discipline. Differing perspectives towards the nature of accounting lead to different research approaches. While some people may argue that accounting practice is associated with psychology and human interests, financial reporting can be primarily perceived as a technical device reflecting economic facts about how the social world works (Gaffikin, 2008). In addition, Saunders et al. (2015) argue that the dominance of positivist paradigm in accounting and finance also influences the researcher's choice.

First and foremost, the research approach is driven by research objectives. This thesis focuses on evaluating information disclosure of ASEAN listed firms and then investigates the causal relationship between ownership and disclosure in ASEAN firms. The study further aims at examining stock market implications of such disclosure. It is expected that empirical results of this study help managers and policy makers explain changes in disclosure levels and make actions on material factors that regulate corporate transparency. This implies the adoption of a quantitative methodology which bases on a positivist paradigm.

I choose positivist epistemology as I believe that knowledge is objective and led by theories so it can be measured by objective methods (Easterby-Smith et al., 2015). Consequently, methods and techniques used in natural sciences appear to form the most appropriate methodological framework to explain the social reality. This approach is closely link to empiricism which uses the test of experience to determine the validity of knowledge (Johnson and Duberley, 2000, p.15). To produce legitimate knowledge, the extent of information disclosure and other relevant factors are measured in a structured manner to infer the causality among them. Moreover, it is strictly supposed by the researcher that a clear distance with the research object must be maintained to ensure of the objectivity of outcomes.

To express results in measurable terms, the research methodology is involved with a quantitative analysis. The research aim is achieved by an experimental design which allows the researcher to test a hypothesis by manipulating one or some independent variables to see how the dependent variable is affected (O'Leary, 2017, p.135). Hypotheses are formulated based on prior developed theories and empirical evidence to predict the relationships among selected variables. The level of information disclosed in annual reports, ownership identities, corporate governance factors, firm-specific and country-specific characteristics are tested against those hypotheses to uncover possible relationships.

Based on the above philosophical assumptions, a set of quantitative research techniques are chosen to carry out the analysis. The quantitative data is analysed using inferential statistical techniques, including descriptive statistics, correlation matrices, bivariate and multivariate regressions. The empirical results are

expected to demonstrate how ownership identities influence the extent of corporate disclosure and whether corporate disclosure has stock market consequences. A large sample of listed firms in ASEAN countries is used to cover a significant proportion of the whole population to facilitate generalisation. This is a highly structured methodology which ensures the scientific objectivity of results (Gill and Johnson, 2010).

### **4.3. Data collection**

To measure the extent of disclosure, this thesis focuses on the narrative sections of annual reports published by listed firms on ASEAN stock markets. Annual reports are collected from companies' websites and databases over the period 2009 to 2017. The textual content of annual reports is pre-processed and then analysed using automated text searches in QSR NVivo 12 software to measure the extent of forward-looking and risk disclosure for each firm-year observation. Other firm-specific financial and non-financial information is directly obtained from Bloomberg database. This leads to a comprehensive set of secondary data which is analysed using quantitative research techniques and the findings ultimately help to explain the causality among ownership structure, information disclosure and the stock market.

#### **4.3.1. The selection of the study countries**

The choice of ASEAN countries in this study is driven by the availability of annual reports which are the focus of the textual analysis. To avoid translation errors and to enable the dictionary-based approach in this study, the researcher only includes firms which issue English versions of their annual reports. Four countries without or with very limited English annual reports, namely Cambodia, Laos, Myanmar and Brunei Darussalam, are excluded from the sample. Annual reports, therefore, are collected for listed companies in the six remaining countries: Singapore, Malaysia, Indonesia, Thailand, Philippines and Vietnam. Financial firms are excluded as risk or forward-looking related words may have different implications for these firms (Li, 2006) and because they are subject to different disclosure regulations (Beretta and

Bozzolan, 2008; Al-Najjar and Abed, 2014; Athanasakou and Hussainey, 2014). Firms without any annual report over the above period are also excluded.

The inclusion of six ASEAN countries allows the researcher to observe how country characteristics affect the ownership-disclosure association. Moreover, country differences in regulatory system and stock market development also influence stock market consequences of disclosure. This cross-country study consequently enhances the generalisability of empirical results in other developing economies.

#### **4.3.2. The object of corporate disclosure measurement**

Corporate disclosure can be provided by a variety of means to help firms communicate with existing shareholders and approach potential investors. Nevertheless, Botosan (1997) asserts that the annual report should provide the most important source for voluntary disclosure because it is a major reporting document which is standardised and supervised by authorities. The uniform representation of annual reports allows the researcher to make cross-industry and cross-country comparisons of disclosure practices. Knutson (1992) adds that this document is mostly used by financial analysts and other types of reports tend to supplement it.

The importance of annual reports in analysing information disclosure is stressed by many scholars in both developed markets (Cooke, 1989; Meek et al., 1995) and developing economies (Ferguson et al., 2002). In some emerging markets, annual report is the mere formal communication to shareholders while other disclosure channels such as conference calls, press releases and the internet are of limited use. Not only stock investors but also investment analysts and bank officers rely on annual reports in their decision-making (Hassan and Christopher, 1996). The discussion of the ASEAN institutional setting in Chapter 2 also shows that annual report remains as the most common means of disclosure used by listed firms in ASEAN countries. Therefore, this thesis focuses on measuring the extent of disclosure in the narrative sections of annual reports issued by the ASEAN listed firms.

### 4.3.3. Sample selection and time period

As textual analysis is time-consuming and complicated, the sample cannot cover all ASEAN listed firms. This study therefore builds a sample based on the proportion of each country's listed firms in the ASEAN region. This sampling method is described in Hair et al. (2019) as the proportionately stratified sampling method which is one of the probability sampling techniques applicable in quantitative research. Each ASEAN country member serves as a stratum which is homogenous and not overlapping with other strata. Hair et al. (2019, p.189) explain that "the number of elements from each stratum is proportionate to the size of a particular stratum to the overall sample size". Therefore, the number of listed companies for each ASEAN country in the sample is determined by the proportion of its listed companies in the whole target population of listed firms in the ASEAN. By using this method, the sample can be representative of the target population without increasing the costs of data collection.

The data collection process is undertaken in three steps. Firstly, the number of listed companies in each ASEAN member country is determined by the country proportion in the population. Secondly, the study relies on the industry distribution of listed companies in each country to decide the number of sample firms in each industry. Finally, sample firms are randomly chosen from Bloomberg database. As discussed above, financial firms are excluded as they are subject to different reporting regulations. As a result, the initial sample of 832 listed firms is developed (Table 4.1).

**Table 4.1. The population and the sample of ASEAN listed firms**

| Country                               | Singapore | Malaysia | Indonesia | Thailand | Philippines | Vietnam | Total   |
|---------------------------------------|-----------|----------|-----------|----------|-------------|---------|---------|
| The target population                 | 635       | 770      | 404       | 483      | 70          | 62      | 2,424   |
| Percentage of firms in the population | 26.20%    | 31.77%   | 16.67%    | 19.93%   | 2.89%       | 2.56%   | 100.00% |
| The sample                            | 218       | 264      | 139       | 166      | 24          | 22      | 832     |

Note: This information is based on available data for ASEAN countries on Bloomberg database.

To obtain the highest possible number of observations, annual reports are manually downloaded from three main sources including companies' websites, stock exchange websites and Bloomberg database over the period 2009 to 2017.

The study chooses this period because corporate reporting in the ASEAN had experienced significant changes after the global financial crisis in 2007-2008. The nine-year period additionally allows the researcher to account for the persistence of corporate reporting over time as managers are unlikely to remove forward-looking or risk disclosure if they mention this information in previous years (Bushee et al., 2003; Skinner, 2003; Graham et al., 2005).

Firms without any English annual reports during the study period are removed, leading to the final sample of 795 firms. The composition of the sample by country and by industry is reported in Table 4.2. More than half of the sample firms are listed in Malaysia and Singapore due to the greater availability of English annual reports in these countries' stock markets. Listed firms in Indonesia and Thailand are roughly equally present in the sample while the low numbers of firms in Philippines and Vietnam indicate limited availability of English annual reports in these two countries. This study employs the Bloomberg industrial classification with a total of nine industries. Table 4.2 shows that ASEAN listed firms mainly operate in consumer discretionary, consumer staples, industrials, and materials sectors. Firms in developing economies including Indonesia, Thailand, Philippines, and Vietnam focus more on producing consumer goods while firms in developed economies such as Malaysia and Singapore are slightly more inclined to industrials sector. The sample initially contains 6,696 annual reports which are written in English. These reports are then processed to make the text ready for the automated textual analysis. As a result, 126 annual reports are removed due to parsing and conversion errors or being not processible in QSR NVivo 12. The final sample includes 6,570 annual reports, indicating an unbalanced panel data.

**Table 4.2. Distribution of firms in the sample by industry and by country**

| Industry/Country       | Indonesia | Malaysia | Philippines | Singapore | Thailand | Vietnam |
|------------------------|-----------|----------|-------------|-----------|----------|---------|
| Communications         | 7         | 9        | 2           | 5         | 14       | 1       |
|                        | 5.19%     | 3.59%    | 8.33%       | 2.43%     | 8.92%    | 4.55%   |
| Consumer discretionary | 32        | 55       | 4           | 49        | 39       | 3       |
|                        | 23.70%    | 21.91%   | 16.67%      | 23.79%    | 24.84%   | 13.64%  |
| Consumer staples       | 21        | 36       | 5           | 19        | 21       | 5       |
|                        | 15.56%    | 14.34%   | 20.83%      | 9.22%     | 13.38%   | 22.73%  |
| Energy                 | 14        | 12       | 3           | 14        | 9        | 3       |
|                        | 10.37%    | 4.78%    | 12.50%      | 6.80%     | 5.73%    | 13.64%  |
| Healthcare             | 5         | 5        | 4           | 9         | 5        | 1       |
|                        | 3.70%     | 1.99%    | 16.67%      | 4.37%     | 3.18%    | 4.55%   |
| Industrials            | 25        | 61       | 0           | 64        | 31       | 5       |
|                        | 18.52%    | 24.30%   | 0.00%       | 31.07%    | 19.75%   | 22.73%  |
| Materials              | 25        | 40       | 3           | 20        | 22       | 4       |
|                        | 18.52%    | 15.94%   | 12.50%      | 9.71%     | 14.01%   | 18.18%  |
| Technologies           | 4         | 30       | 0           | 24        | 9        | 0       |
|                        | 2.96%     | 11.95%   | 0.00%       | 11.65%    | 5.73%    | 0.00%   |
| Utilities              | 2         | 3        | 3           | 2         | 7        | 0       |
|                        | 1.48%     | 1.20%    | 12.50%      | 0.97%     | 4.46%    | 0.00%   |
| Total (795)            | 135       | 251      | 24          | 206       | 157      | 22      |

Another key variable of interest in this thesis is corporate ownership. Ownership information is obtained from Bloomberg database for four ownership identities including the government, institutions, foreign investors and managers. Among these variables, the data for government ownership is calculated by Bloomberg as the total ownership percentage of government and sovereign funds. To assess the effect of ownership on disclosure, ownership data is collected four months after the financial year end when firms normally issue their annual reports. Other corporate financial and non-financial information is also obtained from Bloomberg. The measurement of variables used in this study is specified in the following sections.

#### **4.4. The dependent variables**

##### **4.4.1. The measurement of forward-looking and risk disclosure**

To obtain an insight into the disclosure practice of ASEAN listed companies, this thesis employs an automated textual analysis which relies on wordlists to count the frequency of words or sentences in the narrative sections of annual reports. This implies a dictionary-based approach in evaluating the extent of forward-looking and risk disclosure in ASEAN listed firms. Keyword searches are executed using the NVivo 12 software which is upgraded from Nudist software by QSR International. The textual analysis employs both sentences and words as text

units. Two levels of keyword searches are conducted to obtain a deep understanding of ASEAN firms' disclosure. While the primary search aims at extracting forward-looking (risk-related) sentences from annual reports, the secondary search looks for words related to specific themes or tone to further examine qualitative dimensions of forward-looking (risk) disclosure.

#### **4.4.1.1. The development of forward-looking wordlists**

##### *The list of forward-looking keywords*

In the existing literature, a forward-looking wordlist is developed by consulting a dictionary and then being modified to include the words that frequently appeared in the sample texts while removing other irrelevant words. Li (2010b) targets Management Discussion and Analysis (MD&A) section extracted from 10-K and 10-Q files to examine the tone of forward-looking disclosure. The study first filters forward-looking statements by choosing sentences that contain at least one of these words: "will," "should," "can," "could," "may," "might," "expect," "anticipate," "believe," "plan," "hope," "intend" "seek," "project," "forecast," "objective," or "goal." Based on a manual test of a random sample, Li (2010a) excludes words that are rather boilerplate than indicate future matters in nature. The study then employs the Naïve Bayesian technique to classify sentences into four tones (positive, negative, neutral, uncertain) and twelve content categories.

In another well-cited paper, Hussainey et al. (2003) develop an automated content analysis method in measuring informativeness of voluntary disclosures under the UK context. They firstly search for words that are frequently used to indicate forward-looking information in annual report narratives and then expand the list by searching for synonyms of initial words in Thesaurus dictionary. The wordlist is manually reviewed on a testing sample to remove word forms that introduce noises. For example, the word "expected" will be counted as zero if it is not proceeded by a present tense auxiliary verb such as "is" or "are". In the second step, the study identifies 12 profit-related topics of forward-looking sentences in 60 analyst reports. Such topics are then inter-sectionally searched with the forward-looking wordlist to generate a disclosure score. This score, therefore, is the



number of sentences that are forward-looking in nature and contain a relevant topic.

The forward-looking wordlist, proposed by Hussainey et al. (2003), is widely adopted in follow-up studies with some adjustments. When examining the impact of corporate governance mechanisms on forward-looking disclosures, Wang and Hussainey (2013) add future year numbers into the wordlist as the presence of future years may reveal important information about a firm's upcoming projects or plans. Athanaskou and Hussainey (2014) also add future year numbers into the wordlist and further investigate performance-related themes of forward-looking information obtained from sell-side analyst reports. They argue that such reports better account for the market's view about corporate disclosure quality. Disclosure score is defined as the number of intersections between keyword and topic searches scaled by the total number of sentences in an annual report. This study adopts the relative measure of disclosure to control for the length of narratives; hence, it captures the forward-looking focus of disclosures. More recently, Aribi et al. (2018) use the wordlist adopted in Hussainey et al. (2003) and adjust it based on recommendations of academics and accounting professionals.

By reading a random sample of MD&A sections of 10-K filings, Muslu et al. (2015) develop a comprehensive dictionary-based approach to measure forward-looking disclosures. Particularly, they tag a sentence as forward-looking if it contains one of three following properties: (1) words that indicate future and combinations of adjectives with time indicators such as "following month", "next year", "subsequent period"; (2) conjugations of verbs that imply future such as "we expect", "is/are expected"; or (3) a numerical indication of future years relative to the current year. The study excludes "shall", "should", "can", "could", "may", or "might" from the forward-looking wordlist as these words are normally used in legal language or boilerplate mandated disclosures. Forward-looking disclosure is then measured by both the count and the percentage of the sentences that qualify one of the requirements above. The authors further expand the analysis to investigate topics, quantification and time orientation of forward-looking disclosure.

Other studies employ the wordlist in Hussainey et al. (2003) and add numerical references to future years and conjugations of verbs into the list as recommended by Muslu et al. (2015) (Hassanein and Hussainey, 2015; Abed et al., 2016; Hassanein et al.; 2019). However, these studies improve the reliability of the wordlist by manually reviewing their own textual data to add frequently-appeared words and remove words with low frequency. Hassanein and Hussainey (2015) develop a second list of financial-related keywords to particularly identify financial forward-looking statements while Hassanein et al. (2019) adopt a change method to measure changes in forward-looking disclosure. Abed et al. (2016) consider word forms by dividing forward-looking keywords into four groups. The first group captures both singular and plural forms of words, such as “chance” and “chances”. The second group comprises phrases with two- to four-word length; for example, “coming year” and “coming financial year”. The third group includes verbs which are conditioned by preceding auxiliary verbs to reduce noises from words indicating past events. For instance, variations of the word “forecast” should be included are “forecast”, “forecasts”, “is/are forecasting” and “is/are forecasted” but not “forecasted”, “has forecasted” and “was/were forecasting”. The final group contains year numbers preceded by one of the prepositions “in”, “into”, “for”, “of”, “after”, “before”, “through”, “throughout”, “by” and “during”. This detailed categorisation goes beyond the simple keyword search by identifying the word forms that more accurately capture the nature of forward-looking information.

The prevalent use of the forward-looking wordlist developed by Hussainey et al. (2003) has shown its replicability in content analysis of forward-looking disclosure. This thesis therefore employs this wordlist to capture the extent of forward-looking information in ASEAN firms’ annual reports. Following prior studies, some adjustments are made to improve the applicability of the wordlist. First, future year numbers are added to the list. Second, following Muslu et al. (2015) and Abed et al. (2016), conjugations of forward-looking words are considered to remove the variations of words that indicate the past. The full list of forward-looking words used in this study is provided in Appendix A.

### *The themes of forward-looking disclosure*

Disclosure studies attempt to further understand the content and characteristics of forward-looking disclosure by employing secondary wordlists. The topic of forward-looking disclosure is commonly measured by the intersections between forward-looking word search and a topic-related word search. For example, Hussainey et al. (2003) extract a list of topic-related keywords from analysts' reports to identify the themes of forward-looking disclosure. Bozzolan et al. (2009) develop a disclosure framework which classifies forward-looking information into three topics: strategy, company structure and business environment. In addition, the study gives higher scores if the disclosing firm discusses about the expected impact of a future event with a quantitative measure. Wang and Hussainey (2013) add a list of earnings-related keywords to particularly capture earnings forecasts provided by UK firms. Likewise, Athanasakou and Hussainey (2014) combine the wordlist developed by Hussainey et al. (2003) with a performance-related wordlist to find sentences that indicate future performance. Meanwhile, Hassanein and Hussainey (2015) employ two wordlists to count the frequency of forward-looking financial sentences in UK firms' narrative statements.

Some other studies develop a comprehensive set of wordlists that indicate main topics that are frequently discussed by firms. Muslu et al. (2015) use Hussainey et al. (2003)'s wordlist to extract forward-looking sentences and then use 7 wordlists to classify those sentences into 7 topics including performance, operation, investment, finance, employee, macroeconomy and accounting. The study employs another wordlist which contains alphanumeric words to capture the quantification of forward-looking information. Finally, a list including references to a future year and horizon keywords is used to capture the time horizon of disclosure. The keywords can distinguish a short term, such as "coming quarter", "current quarter", "incoming month", "next period", "following month" from a long term, such as "coming year", "next year", "decade", "foreseeable future", providing an insight into the horizon of forward-looking information. Meanwhile, Abed et al. (2016) analyse the themes of forward-looking disclosure in UK firms' annual reports by searching for topic-related keywords in forward-looking statements. The study

consults prior disclosure studies to develop the words indicating four main topics including financial information, strategies, corporate structure, and corporate environment. Synonyms of the words are added to enhance the applicability of the wordlists.

After extracting forward-looking sentences from ASEAN firms' annual reports, this thesis follows previous studies (Beretta and Bozzolan, 2004; Bozzolan et al., 2009; Abed et al., 2016) to further investigate the themes of forward-looking disclosure including financial performance, strategy, structure, and corporate environment. The wordlists developed by Abed et al. (2016) are employed to conduct the second round of text searches in QSR NVivo 12. These wordlists are suitable for the purpose of measuring both financial and non-financial forward-looking information provided by ASEAN firms in this thesis. The keywords are specified in Appendix B.

#### **4.4.1.2. The development of risk-related wordlists**

##### *The list of risk-related keywords*

Different risk-related wordlists have been developed in previous studies based on definitions of the risk concept and risk disclosure guidelines of professional bodies. Li (2006) proposes a list containing six words which are generated from two root words, "risk" and "uncertain". The list includes "risk", "risky", "risks", "uncertain", "uncertainty", "uncertainties". Additionally, the author manually tags the risk type for each occurrence of risk-related word for further comprehension of risk sentiment.

Nelson and Pritchard (2007) identify risk factors disclosed by US firms by a wordlist of risk categories. The study measures the meaningfulness of cautionary language by three indicators: the number of words in cautionary language, the number and type of risk factors disclosed and the number of words per risk factor. Campbell et al. (2014) adopt the wordlist proposed by Nelson and Pritchard (2007) and then add the words that repeatedly appeared in firms' risk factor sections using a clustering approach, also known as Latent Dirichlet Allocation. This wordlist is then decomposed into subcategories of risk types: financial risk,

litigation risk and tax risk. For each narrative section of 10-K annual reports, three measures of risk disclosure are calculated: total word count, total keyword count and keyword count by risk type.

In another sample of 10-K files, Kravet and Muslu (2013) develops their own risk-related wordlist based on reading of 100 randomly selected annual reports. The final list includes “can”, “cannot”, “could”, “may”, “might”, “risk”, “uncertain”, “likely to”, “subject to”, “potential”, “vary”, “depend”, “expose”, “fluctuate”, “possible”, “susceptible”, “affect”, “influence”, and “hedge”. Other forms of these words are also included. Risk sentiment is therefore measured as the number of sentences that contain at least one of the words above. As companies are likely to repeat risk disclosures, the study adopts a change method to capture new risk disclosures.

On a large sample of UK listed firms, Elshandidy et al. (2013) rely on the definition of risk as “variations and fluctuations around a target value” adopted in Linsley and Shrives (2006). This definition widens the normal risk concept to comprise both potential gains and losses, both opportunities and threats. The study follows a three-step procedure to measure risk disclosure. First, an original risk-related wordlist is obtained from reviewing prior academic research on risk concepts. Second, a Roget’s Thesaurus dictionary is employed to identify synonyms of the words. Third, risk-related words that frequently appear in annual report narratives are added to the list. To enhance the applicability of the wordlist, the authors run a text search on a random sample of 15 annual reports and then excludes words that do not appear in the sample. Follow-up studies employ the wordlist proposed by Elshandidy et al. (2013) to compare risk disclosure practice in different countries. Adjustments are made according to each country’s legal context to enhance the applicability of the wordlist (Elshandidy et al., 2015; Elshandidy and Neri, 2015; Saggat and Singh, 2017; Elshandidy et al., 2019).

The above discussion leads to the use of the risk-related wordlist developed by Elshandidy et al. (2013) in this thesis. Compared to other wordlists, this wordlist adopts a wider definition of risk. Moreover, this wordlist is more applicable to content analysis of annual reports while the earlier wordlists are mainly extracted

from manual reading of 10-K filings which are highly standardized. The full list of risk-related keywords is provided in Appendix C.

### *Content dimensions of risk disclosure*

In the existing empirical literature, it has been claimed that risk information provided by firms is generally related to past events and lack of specificity. Directors have incentives to mainly discuss historical risk information with non-time specific and purely qualitative content as they want to avoid unfavourable outcomes or adverse market reactions (Beattie et al., 2004; Beretta and Bozzolan, 2004). Disclosure studies therefore further examine how risk information should be disclosed to enhance its usefulness in decision-making.

Beretta and Bozzolan (2004) state that the quality of risk disclosure is enriched by how well expected impact of disclosed risks is qualified and quantified. Investors can better understand a firm's risk exposure if more future risk information is provided in quantitative terms. Moreover, the expected impact of future risks on the firm's performance is highly relevant to decision-making. The study consults the guidelines proposed by CICA (2001) and ICAEW (2002) that informative risk disclosures should comprise management discussion about their approach to risks and how firms invest resources and capabilities in managing them. Three semantic properties are then proposed to examine risk disclosure quality in Italian listed firms: (1) the economic sign – the direction of expected impact of risks upon future corporate performance; (2) type of measure - such impact is expressed in monetary or non-monetary terms; (3) outlook orientation – general expectation or plans and actions to manage disclosure risks. Beretta and Bozzolan (2004), in addition, compute the density of risk disclosures as the ratio between the number of risk-related sentences and the total number of sentences in a report. The study uses this ratio as a qualitative dimension of disclosure as companies may strategically dilute limited risk information in a “thick” annual report, making readers difficult to find and evaluate their risk profile.

Linsley and Shrivs (2006) adopt the framework developed by Beretta and Bozzolan (2004) in UK firms. After extracting risk-related sentences from UK firms'

annual reports, the study classifies them into monetary/non-monetary, future/past, good news/bad news/neutral. For example, a risk-related sentence can be interpreted as monetary/good news/past, which informs reader of backward-looking risk information in a positive tone. The content analysis creates a three-dimensional measure of risk information which comprehensively incorporates the important attributes of disclosure quality. This framework is also employed in Jia et al. (2019) with a sample of Australian firms.

In addition to the dimensions developed by Beretta and Bozzolan (2004), Beattie et al. (2004) suggest that another qualitative dimension of disclosure is the spread of information across topics. They argue that a balanced discussion of different risk topics provides investors with a comprehensive view of the disclosing firm' risk profile. Miihkinen (2012) follows Beattie et al. (2004) and Beretta and Bozzolan (2004) to measure four qualitative dimensions of risk disclosure in Finnish firms including the quantity of risk information, the expected economic impact of risks, the coverage of risk topics and the quantification of risks. This framework is also adopted to measure the quality of UK firms' risk disclosure in Elshandidy et al. (2018).

Kravet and Muslu (2013) analyse risk disclosures by sections of 10-K annual reports but omit exhibits and financial schedules to avoid capturing risk-related sentences that are not informative to investors. This study focuses on negative risk news which is believed to cause stronger market reactions than positive news. The negation of risk disclosure is measured by counting the frequency of risk-related sentences which contain at least one of the negative words: "negative", "material", "adverse", "damage", "destroy", "loss", "harm", "catastrophe", "tragic", "destruct", "serious", and "hamper". Other forms of these words are also included.

As investors may react differently to different types of risk, other studies classify risk-related statements into risk types. In Abraham and Cox (2007), risk-related sentences UK firms' annual reports are manually coded before being categorised into business risk, financial risk and internal control risk. Meanwhile, Campbell et al. (2014) extract risk factors contained in 10-K filings and then use a keyword list of over 300 words to identify risk subcategories including financial risk, tax risk,

litigation risk, other-systematic risk, and other-idiosyncratic risk. This classification allows the authors to examine whether firms discuss specific risks and the extent of each risk category in their discussion.

The above discussion shows that information about future risks is more value relevant than backward-looking information as it reduces investors' uncertainty in estimating a firm's future value. Moreover, investors are better informed of the expected impact of risks on future performance if risk information is provided with quantitative measures. Nevertheless, as the quality of risk disclosure is abstract and difficult to quantify, there is no consensus in the methodology applied in prior empirical studies. This thesis employs two qualitative attributes, time horizon and quantification, to further investigate the focus of risk disclosure among ASEAN firms. The automated text searches require the addition of wordlists to measure these two dimensions. The forward-looking wordlist used in Hussainey et al. (2003) is therefore employed to measure the extent of forward-looking risk information while the quantification of risk information is captured by the Harvard General Inquirer list of words indicating numbers. The full list of these keywords is provided in Appendix D.

#### **4.4.1.3. The measurement of disclosure tone**

In the existing literature, many studies employ the tone of disclosure to examine market reactions to positive and negative news. There are two common types of wordlists in measuring disclosure tone: built-in dictionaries of text mining commercial programs such as General Inquirer and Diction or domain-specific dictionaries such as the wordlists developed in Henry's (2006; 2008) and Loughran and McDonald's (2011).

Kothari et al. (2009) employ the dictionary integrated in General Inquirer software to measure the tone of disclosures provided by managers, analysts and news reporters. Disclosure measures are calculated as the frequency of negative and positive words across texts, business categories and sources. Meanwhile, Feldman et al. (2010) employ two wordlists, one from a general dictionary – Harvard IV and another domain-specific Loughran and McDonald sentiment



wordlist to measure changes in the tone of MD&A section. Three measures of disclosure tone are used: positive word count, negative word count and the difference between the two; all divided by the total word count of MD&A section.

In another study, Price et al. (2012) use Harvard IV and Henry's dictionaries, which are integrated into General Inquirer software, to measure the tone of earnings conference calls in US firms. The count of positive and negative words within each document is generated by the General Inquirer software. The study then employs two ratio forms of disclosure tone: (1) the number of positive words divided by the number of negative words; and (2) the difference between positive words and the number of negative words divided by the sum of the two.

Allee and Deangelis (2015) investigate the extent to which tone words are evenly spread over the narratives of conference calls. They employ the tone wordlist developed by Loughran and McDonald (2011) and adjust the list by removing words that are normally used for greetings or referring to accounting terms. The negativity of words is also considered when counting the frequency of word occurrences.

Arslan-Ayaydin et al. (2016) investigate whether highly incentivized managers inflate tone of earnings press releases to maximize the value of their portfolios. Disclosure tone is defined as the spread between the percentage of positive and negative words, relatively to the total word count. Three wordlists are employed: Loughran and McDonald (2011), Henry (2008) and the dictionary built in Diction 5.0 software for comparisons. However, there is no significant difference in the predictive power of tone words when different dictionaries are used.

Brau et al. (2016) develop their own wordlist to measure the strategic tone of IPO registration documents. They compile strategic-related words from prior studies and Diction wordlist and then ask MBA students to rate whether such words indicate a good or bad strategy on a 5-point continuous scale. The author controls for prefixes and negation. This means, if a positive word is preceded by a negation word, it should be counted as zero. Besides six negation words proposed by Loughran and McDonald (2011), the study adds 23 more words and negate any

one of such words occurs within two words preceding a financial statement dictionary word.

More recently, Borochin et al. (2018) employ the tone measurement approach adopted in Brau et al. (2016) and measure the net tone of conference calls to capture the dominating tone of MD&A section (Price et al., 2012). Additionally, the study employs the term-weighting approach adopted in Loughran and McDonald (2011) to assign weights for each term based on its frequency of occurrence across the entire corpus of documents. This technique controls for words that are simply a mechanical feature of the communications means.

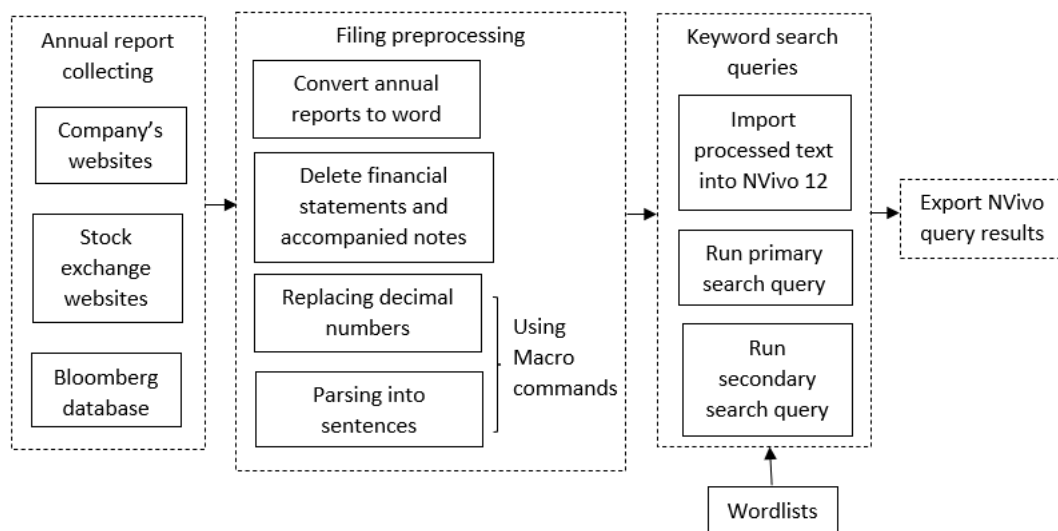
This thesis employs the sentiment wordlist developed by Loughran and McDonald (2011) to capture the tone of forward-looking and risk disclosure. This domain-specific wordlist outperforms other general wordlists in capturing the tone of disclosure in accounting and finance. Additionally, this study follows previous studies to use a net tone measure which is the difference between positive and negative sentiment scaled by the total of the two (Feldman et al., 2010; Schleifer and Walker, 2010; Price et al., 2012; Arslan-Ayaydin et al., 2016; Borochin et al., 2018).

#### **4.4.1.4. Summary of the textual analysis process in this thesis**

Figure 4.1 illustrates the sequence of steps in the textual analysis adopted in this thesis. Firstly, English annual reports are manually downloaded from three main sources: companies' websites, stock exchange websites and Bloomberg database to obtain the most possible data. As annual reports are originally available in PDF format, they are converted into MS Word for pre-processing and cleaning up before importing into QSR NVivo 12.

Audited financial statements and the accompanied notes are then manually deleted from annual reports as the focus of this study is the narrative sections. The independent auditor's report and the directors' statement of responsibility to financial statements are also excluded as these sections are highly standardised. While prior studies further remove the statement of corporate governance and committees' reports, the thesis keeps this information for the analysis due to large

differences in ASEAN countries' corporate reporting regulations as discussed in Chapter 2. Including these sections in the text data would help to infer corporate disclosure practices in this region. The material for the textual analysis in this thesis, therefore, consists of chairman's, CEO's and financial director's statements, corporate profile, operating and financial review, corporate governance report (this section includes remuneration report, report of audit and nomination committees, statement of internal control and risk management). Besides those sections, firms in Malaysia and Singapore include a management discussion and analysis to explain business results and outlook in their annual reports to comply with legal requirements. Corporate social responsibility report is also a mandatory part of an annual report in Indonesia, Malaysia, and Singapore but this is a voluntary practice in the remaining countries.



**Figure 4.1. Analysis steps in constructing disclosure measures**

As the text search query in QSR NVivo 12 can only count words, phrases or paragraphs, the text data needs to be pre-processed so that NVivo can properly detect sentences which are chosen as the text unit in this study. A macro command in MS Word is employed to remove decimals which might be mistaken as a full stop giving an end to a sentence. Following that, another macro command is used to replace the full stop with a paragraph sign so that QSR NVivo 12 treats each sentence as a separate paragraph. This is a critical step to ensure that the

text search query detects words at the sentence level, which is the targeted text unit in this study.

Once the text is ready, it is imported into QSR NVivo 12. The primary text search looks for sentences which contain at least one forward-looking (risk-related) keyword. These sentences are then stored separately in the query results in NVivo. The secondary text search is run on the corpus of forward-looking (risk-related) sentences to count the frequency of word occurrences. For each disclosure variable, the corresponding wordlist is used.

As annual report is an integrated document which comprises different types of information and topics, it is commonly much longer than other corporate reports. Several prior studies show that the level of forward-looking information in annual reports is relatively low whereas backward-looking information is predominant (Clatworthy and Jones, 2003; Schleicher and Walker, 2010). While some readers may read the whole report and consider the relative amount of targeted information, other readers may look for specific information but do not read the report in full. There is a good reason to expect different implications of the count of sentences/words (absolute measure) and the percentage of sentences/words (relative measure) on investors' perceptions. Therefore, this thesis measures disclosure in both absolute and relative terms. The automated textual analysis finally creates 7 disclosure variables related to forward-looking information and 6 disclosure variables related to risk information. The definitions of these variables are summarised in Table 4.3.

**Table 4.3. Summary of disclosure measures in this thesis**

|   | <b>Variable name</b>                                | <b>Variable definition</b>  |
|---|---|---|
| The overall level of forward-looking disclosure | Forwlook_count/<br>Forwlook_percent                 | The count/percentage of forward-looking sentences in the annual report  |
| Themes of forward-looking disclosure            | Financial_count/<br>Financial_percent               | The count/ the percentage of financial words in forward-looking sentences   |
|   | Strategy_count/<br>Strategy_percent                 | The count/ the percentage of strategy-related words in forward-looking sentences  |
|   | Structure_count/<br>Structure_percent               | The count/ the percentage of structure-related words in forward-looking sentences   |
|   | Corenvi_count/<br>Corenvi_percent                   | The count/ the percentage of corporate environment-related words in forward-looking sentences   |
| Tone of forward-looking disclosure              | Forwlookpositive_count/<br>Forwlookpositive_percent | The count/ the percentage of positive words in forward-looking sentences  |
|   | Forwlooknegative_count/<br>Forwlooknegative_percent | The count/ the percentage of negative words in forward-looking sentences  |
|   | Forwlook_tone                                       | The difference between the number of positive words and the number of negative words divided by the total of positive and negative words in forward-looking sentences |
| The overall level of risk disclosure            | Risk_count/<br>Risk_percent                         | The count/ percentage of risk-related sentences in the annual report  |
| The content dimensions of risk disclosure       | Riskforwlook_count/<br>Riskforwlook_percent         | The count/ the percentage of forward-looking words in risk-related sentences  |
|   | Riskquan_count/<br>Riskquan_percent                 | The count/ the percentage of quantitative words in risk-related sentences   |
| Tone of risk disclosure                         | Riskpositive_count/<br>Riskpositive_percent         | The count/ the percentage of positive words in risk-related sentences   |
|   | Risknegative_count/<br>Risknegative_percent         | The count/ the percentage of negative words in risk-related sentences   |
|   | Risk_tone   | The difference between the number of positive words and the number of negative words divided by the total of positive and negative words in risk-related sentences    |

#### **4.4.1.5. The reliability and validity of disclosure measures**

It is important to ensure that the results produced by a measurement method are valid and reliable. The validity of measurement refers to the ability of the measuring instrument in generating accurate inferences based on the test scores. When a measure captures something other than what the researcher intends to examine, it is commonly referred as invalid (Weathington et al., 2012, p.59). Low validity hinders the researcher's ability to draw accurate conclusions about the constructs he is trying to assess. Consequently, the research questions are not adequately answered.

On the other hand, the reliability of measurement refers to the degree of consistency in results produced by the measuring instrument. A valid measure must achieve a certain reliability level at which it produces consistent results in

different times and under different conditions (Saunders et al., 2019, p.518). Mitchell (1996) suggests that the reliability of measurement can be tested by the level of internal consistency which is most commonly calculated by the Cronbach's alpha. This statistic ranges between 0 and 1; and the value of 0.7 or above can be seen as acceptable in social sciences (Milner and Adler, 1999; Bryman, 2004; Deumes and Knechel, 2008).

Researchers have to accept a certain level of measurement errors which inevitably occur when making inferences from samples. These errors can be divided into Type I and Type II. Saunders et al. (2019) explain that Type I error, known as false-positive, refers to the conclusion of an association between two variables when they are not related while Type II error, known as true-negative, refers to the failure to confirm the association between two variables when they are related. As there is a trade-off between these two errors, reducing the likelihood of making a Type I error causes an increase in the likelihood of making a Type II error. Therefore, researchers aim to minimise when not being able to completely avoid measurement errors.

In previous disclosure studies, the validity of a disclosure measurement methodology is widely assessed by a manual content analysis of a test sample and then comparing the results with the automated process' scores. For example, Hussainey et al. (2003) read 50 annual reports which are randomly selected from the AIMR-FAF database and annotate sentences that imply forward-looking information. The results show that Nudist software successfully detects 85.5% of the forward-looking sentences. This means that 14.5% of sentences detected in Nudist software do not capture forward-looking information due to Type I and Type II errors. To assess the reliability of the automated coding process, Hussainey et al. (2003) use Pearson and Rank correlations between the scores obtained by manual reading and the scores generated by Nudist software. Correlation coefficients are 0.96 and 0.95 respectively, suggesting that the two measures are closely correlated.

Likewise, Elshandidy et al. (2013) assess the validity of the risk-related wordlist in capturing risk disclosure among UK FTSE all-share companies by reading a

random sample of 30 risk-related statements for 15 firms in the Nudist outputs. They find that the risk keywords correctly identify 80% of the statements indicating risk information. The reliability of the measurement approach is assessed by the Cronbach's alpha. The alpha value of 90% demonstrates high consistency between aggregate, mandatory and voluntary risk disclosure scores. Other disclosure studies also apply this two-stage procedure to check the disclosure score's validity and reliability (Abraham and Cox, 2007; Wang and Hussainey, 2013; Athanasakou and Hussainey, 2014; Campbell et al., 2014; Elshandidy and Neri, 2015; Elshandidy et al., 2015; Hassanein and Hussainey, 2015; Elshandidy et al., 2019; Hassanein et al., 2019).

In studies that apply manual coding, more than one coder is employed to test the consistency of results. For instance, Schleicher and Walker (2010) compile keywords that are associated with positive and negative impressions in another sample to mitigate the coder's subjectivity in coding the tone of the main sample. This also enhances the applicability of the scoring procedure in different conditions. This study further evaluates the reliability of their disclosure measurement method by employing another independent coder. The agreement rate between the principal and second coders is 98% which implies an excellent degree of inter-coder reliability. Likewise, Beretta and Bozzolan (2004) employ five researchers to independently code risk disclosure in subsets of annual reports issued by Italian listed firms. This allows the authors to ensure that the coding procedure is applicable to different datasets and produce consistent scores among coders. The alpha developed in Krippendorff (1980) is employed to test the reliability of each dimension of risk disclosure. As the alpha is equal or greater than 0.75, the authors confirm that the measurement method is reliable. This method is also applied in Linsley and Shrivies (2006); Bozzolan et al. (2009); Oliveira et al. (2011); Elzahar and Hussaney (2012); Abed et al. (2016) and Habtoor et al. (2019).

Following previous studies, this thesis uses two tests to evaluate the validity and reliability of disclosure scores. First, the researcher follows Hussainey et al. (2003) to evaluate the correlation between manual and automated content analysis.

Appendix E provides some examples of forward-looking and risk sentences in annual reports of ASEAN listed firms exported from the search query results in QSR NVivo 12. The researcher reads a random test sample of 20 annual reports published by ASEAN listed companies and manually counts sentences that express forward-looking (risk) information. In the second round of manual reading, the researcher counts the words indicating themes and tone in forward-looking sentences and the words indicating the future, quantification, and tone in risk-related sentences. Disclosure scores from both manual and automated content analyses are provided in Appendix F. Following that, Pearson and Spearman correlation coefficients between these disclosure scores and the NVivo query results are obtained. Table 4.4 shows that all correlation coefficients between each pair of disclosure scores are higher than 80%, ranging between 80.83% and 99.32%. These results suggest that the scores obtained from QSR NVivo 12 are highly correlated with the scores obtained from manual coding. Therefore, the method used in this thesis is valid in measuring the underlying construct of information disclosure.

**Table 4.4. Pearson and Spearman correlation coefficients between manual and automated disclosure scores**

| Forward-looking disclosure | Forwlook_count | Financial_count  | Strategy_count | Structure_count    | Corenvi_count      | Forwlook positive_count | Forwlook negative_count |
|----------------------------|----------------|------------------|----------------|--------------------|--------------------|-------------------------|-------------------------|
| Pearson coefficient        | 99.32%         | 95.24%           | 96.42%         | 94.84%             | 88.76%             | 98.52%                  | 92.28%                  |
| Spearman coefficient       | 99.28%         | 91.02%           | 95.87%         | 91.49%             | 87.66%             | 95.76%                  | 89.93%                  |
| Risk disclosure            | Risk_count     | Riskfwlook_count | Riskquan_count | Riskpositive_count | Risknegative_count |                         |                         |
| Pearson coefficient        | 99.05%         | 81.20%           | 99.41%         | 96.93%             | 98.96%             |                         |                         |
| Spearman coefficient       | 98.80%         | 80.83%           | 99.25%         | 88.00%             | 95.05%             |                         |                         |

Notes: *Forwlook\_count* is the count of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Risk\_count* is the count of risk-related sentences in the annual report; *Riskfwlook\_count/ Riskquan\_count* is the count of forward-looking/ quantitative words in risk-related sentences, *Riskpositive\_count/ Risknegative\_count* is the count of positive/ negative words in risk-related sentences.

Second, this study employs Cronbach's alpha to examine the reliability of the measurement method. The alpha of 87.13% obtained for the computed disclosure scores indicates that the method achieves a high level of consistency, compared to the generally acceptable social science measure of 70% (Milner and Adler, 1999;



Bryman, 2004; Deumes and Knechel, 2008). It can be concluded that the automated measurement procedure of disclosure in this thesis is reliable.

#### **4.4.2. Stock market implications of forward-looking and risk disclosure**

In the second part of the empirical analysis, this thesis aims at examining the stock market implications of forward-looking (risk) disclosure provided by ASEAN listed firms. In this thesis, market consequences of disclosure are measured by four stock variables: stock returns, abnormal stock returns, stock return volatility and stock liquidity. All stock market indicators are calculated for a 12-month period starting four months after the financial year end. By doing so, the immediate change in share prices after the publication of annual reports is captured. This is consistent with Boubaker et al. (2019) which also examine information disclosed in annual reports.

Following previous studies (Jiao, 2011; Cen et al., 2013; Muslu et al., 2015; Asahlawi et al., 2021; Hassanein, 2022), stock return is calculated as the 12-month buy-and-hold return. Meanwhile, abnormal return is the difference between the 12-month buy-and-hold stock return and the 12-month beta-adjusted market return, which reflects the excess earnings gained by informed investors. This measure is consistent with Clement et al. (2003), Beatty et al. (2019) and Nagel et al. (2021).

Stock volatility and stock liquidity are measured using daily prices collected for the 12-month period starting four months after the financial year end. The standard deviation of daily stock returns is a widely used measure in prior studies as a proxy of post-disclosure volatility (Bushee and Noe, 2000; Kothari et al., 2009; Gharbi et al., 2014; Muslu et al., 2015; Xu and Liu, 2018; Yang, 2020; Azrak et al., 2021; Malaquias and Junior, 2021). Kothari et al. (2009) state that the standard deviation of stock returns increases when there is higher uncertainty in future cash flows, which indicates a firm's risk level. The study also suggests that this indicator is positively related to the infrequency of information available to the market and the information gap between informed and uninformed investors. If information provided by firms is useful to investors, stock return volatility should be reduced.

This measure is therefore employed in this study to capture the volatility of stock returns after annual reports become publicly available.

Stock liquidity is another measure of post-disclosure information asymmetry in the existing literature. One important dimension of stock liquidity is the bid-ask spread of stock prices. In an early study, Leuz and Verrecchia (2000) consider the bid-ask spread as the mechanism of price protection for stock traders. When information is more available, greater confidence induces investors to trade more frequently with larger volumes. Stock prices are agreed more quickly and easily and consequently the difference between bid and ask prices is smaller. Amihud illiquidity ratio, proposed by Amihud (2002), is an alternative measure of stock liquidity. It is calculated as the ratio of the absolute value of daily stock returns to the dollar trading volume over a certain period. This measure requires low data input and outperforms other proxies in capturing illiquidity in advanced stock markets like the US (Boubaker et al., 2019). However, it becomes undefined if the stock trading volume is zero. This situation is less of concern in the US market but more common in emerging markets where liquidity is generally low (Kang and Zhang, 2014). Le and Gregoriou (2020) underline that it is important to incorporate zero trading days in the calculation as they also imply illiquidity. This limitation impairs the applicability of the Amihud measure in the context of ASEAN emerging markets.

As stock liquidity is a multi-dimensional concept, it is unlikely that a consistent liquidity measure can capture all transactional properties of the market and different proxies come with both merits and demerits (Kluger and Stephan, 1997; Chai et al., 2010). Given the diverging feature of ASEAN stock markets, this study measures stock liquidity as the difference between bid and ask prices scaled by their midpoint. This proxy of liquidity reflects transaction costs as the combination of three factors: inventory holding costs, order processing costs and asymmetric information costs, which are considered by market makers in dealing with informed investors (Stoll, 2000). This choice is also supported by the wide use of this measure in both advanced and emerging market context in previous studies (Leuz and Verrecchia, 2000; Ascioğlu et al., 2005; Miihkinen, 2013; Attig et al., 2006;

Jiang et al., 2011; Agarwal et al., 2015; Elshandidy and Neri, 2015; Xu and Liu, 2018).

The definition and formula of the stock market variables are specified in Table 4.5 below.

**Table 4.5. Summary of stock market variables in this thesis**

| Stock market implications        | Variable name | Variable calculation   |
|----------------------------------|---------------|--|
| Annual buy-and-hold stock return | BHreturn      | $BHreturn_{i,t} = \frac{P_{i,t} - P_{i,t-1} + D_{i,t}}{P_{i,t-1}}$ <p>Where <math>P_{i,t}</math> is the closing price of stock i four months after the end of financial year t</p> <p><math>P_{i,t-1}</math> is the closing price of stock i four months after the end of financial year t-1</p> <p>D: dividends for year t</p>  |
| Abnormal stock return            | ABreturn      | $Abreturn_{i,t} = BHreturn_{i,t} - Beta_{i,t} \times Mreturn_t$ <p>where <math>Beta_{i,t}</math> is the beta of stock i in year t;</p> <p><math>Mreturn_{i,t}</math> is the average market return in year t</p>  |
| Stock return volatility          | Volatility    | $Volatility_{i,t} = \sqrt{\frac{\sum_{k=1}^n \left( \frac{P_{i,k} - P_{i,k-1}}{P_{i,k-1}} - \bar{R} \right)^2}{n}}$ <p>Where <math>\bar{R}</math> is the 12-month average daily stock return</p> <p><math>P_{i,k}</math> is closing price of stock i in day k</p> <p><math>n_t</math>: the number of trading days in year t</p> <p><math>i = 1, 2, \dots, 795</math></p> <p><math>t = 2009, 2010, \dots, 2017</math></p> |
| Stock liquidity                  | Spread        | $Spread_{i,t} = \frac{1}{n} \times \sum_{k=1}^n \frac{bid_{i,k} - ask_{i,k}}{(bid_{i,k} + ask_{i,k})/2}$ <p>Where <math>bid_{i,k}</math> is the bid price of stock i in day k</p> <p><math>ask_{i,k}</math> is the ask price of stock i in day k</p> <p><math>n_t</math>: the number of trading days in year t</p> <p><math>i = 1, 2, \dots, 795</math></p> <p><math>t = 2009, 2010, \dots, 2017</math></p>              |

## 4.5. The independent variables and control variables

### 4.5.1. Ownership variables

Ownership data is collected for four ownership identities including institutions, foreign investors, managers and government. The data is manually obtained from Bloomberg database four months after the financial year end to capture the changes in ownership when firms make their annual reports publicly available. Ownership is measured as the percentage of shares held by each type of shareholder. Thereby, four ownership variables are employed in this thesis.

To measure ownership, some previous studies employ a dummy variable to control the presence of an ownership type (Nelson and Pritchard, 2009) or the controlling effect of an ownership type (Makhija and Patton, 2004; Luo et al., 2006; Jiang and Habib, 2009). Meanwhile, many other studies use the percentage of shares held by owners (Haniffa and Cooke, 2002; Eng and Mak, 2003; Barako et al., 2006; Cheng and Courtenay, 2006; Huafang and Jianguo, 2007; Donnelly and Mulcahy, 2008; Alhazaimah et al., 2013; Wang and Hussainey, 2013; Core et al., 2015; Al-Janadi et al, 2016; Hu et al., 2017; Alnabsha et al., 2018). As this thesis examines how ownership identity affects disclosure, using a dummy variable is not suitable. The percentage of shareholdings better captures ownership changes over time and therefore better fits the research purpose. Variable names and definitions are summarized in Table 4.6 below.

**Table 4.6. Summary of ownership variables**

| Variable name   | Variable definition   |
|-----------------|---|
| Institution_own | The percentage of shares held by institutional shareholders |
| Foreign_own     | The percentage of shares held by foreign shareholders       |
| Manager_own     | The percentage of shares held by managers                   |
| Government_own  | The percentage of shares held by the government             |

## **4.5.2. Control variables**

### **4.5.2.1. Control variables when examining the effect of ownership on disclosure**

#### *Firm characteristics*

Prior studies emphasize the importance of firm size in explaining disclosure levels. Large firms are more likely to exhibit greater disclosure as they are exposed to higher agency and litigation costs compared to small firms (Watts and Zimmerman, 1978, 1983; Hossain et al., 1995; Deegan, 2009). Moreover, large firms can afford the costs involved with producing disclosure thanks to their resource advantage over small firms and may be incentivized to signal that advantage to the stock market (Hassan et al., 2006).

Empirical studies also suggest that financial leverage influences a firm's disclosure policy. Creditors require more information from high-g geared firms as they face greater default risk. In response, to reduce monitoring costs, firms with high debt levels tend to provide more information to explain its financial situation and assure investors that it manages risks well (Jensen and Meckling, 1976).

Profitability is another important determining factor of disclosure. Agency theory predicts that profitable firms are more publicly visible so they have incentives to disseminate information to satisfy a high information demand (Jensen and Meckling, 1976). Likewise, signalling theory suggests that profit-making firms may want to send positive signals through increased disclosure to distinguish themselves from non-profitable firms.

Following previous disclosure studies (Lang and Lundholm, 1993; Hossain et al., 1995; Hussainey et al., 2003; Beattie et al., 2004; Beretta and Bozzolan, 2004; Hassan et al., 2006; Abraham and Cox, 2007; Aljifri and Hussainey, 2007; Miihkinen, 2012; Elshandidy et al., 2013; Kent and Ung, 2013; Al-Najjar and Abed, 2014; Athanasakou and Hussainey, 2014; Hassainein and Hussainey, 2015; Allini et al., 2016; Saggarr and Singh, 2017; Hussainein et al., 2019), firm size, leverage and profitability are employed as control variables in this thesis' regression models.

A firm's size is measured as the firm's total assets at the end of the financial year scaled by the country's total assets. The relative measure allows the study to control for the size differences among ASEAN economies. Debt-to-equity ratio is the proxy for financial leverage while profitability is measured as the return on total assets.

Firm growth is also a determinant of corporate disclosure in the existing literature. Firms with growth opportunities have incentives to increase disclosure to maximize their ability to obtain external financing (Elshandidy et al., 2013). In the empirical literature, firm growth is measured in several ways. Li (2006) and Nelson and Pritchard (2007) use the market-to-book ratio while Fama and French (2005) employ the growth rate of total assets. Meanwhile, other studies use earnings growth such as Al-Najjar and Hussainey (2011), Elshandidy et al. (2013), Athanasakou and Hussainey, 2014, Elshandidy and Neri (2015) and Saggarr and Singh (2017). This study follows Bushee and Noe (2000), Kravet and Muslu (2013) and Ntim et al. (2013) to include sales growth. This variable is obtained by calculating the year-on-year percentage change in sales revenue.

Another control variable is liquidity which is measured as the ratio of total current assets to current liabilities. According to Eng and Mak (2003), firms with greater liquidity tend to provide excessive information to signal their ability to manage short-term finance. Other disclosure studies also control for liquidity when examining disclosure such as Marshall and Weetman (2007) and Elshandidy and Neri (2015).

Finally, the length of annual report is included as a control variable to account for the relative focus of forward-looking (risk) disclosure in ASEAN firms' annual reports. As firms may have more news to share in a long annual report, one can expect a larger amount of forward-looking (risk) information when the size of annual report increases. Moreover, forward-looking (risk) information might be diluted in an annual report which contains many other types of information. In a large annual report, firms may want to discuss more information to ensure that the readers can interpret their messages. This variable is measured as the natural logarithm of the total word count of the annual report.

### *Corporate governance factors*

Corporate governance consists of different factors that build the monitoring system to mitigate agency conflicts between managers and shareholders. The literature suggests that board characteristics such as board size, composition (executive and non-executive directors, male and female directors), expertise, CEO role duality, number of board meetings, independence (dependent and independent non-executive directors) potentially affect the extent of disclosure (Jensen, 1993; Chen and Jaggi, 2000; Gul and Leung, 2004; Barako et al., 2006; Cheng and Courtenay, 2006; Linsley and Shrives, 2006; Abraham and Cox, 2007; Donnelly and Mulcahy, 2008; Oliveira et al., 2011; Al-Najjar and Hussainey, 2011; Elzahar and Hussainey, 2012; Elshandidy et al., 2013; Ntim et al., 2013; Wang and Hussainey, 2013; Allini et al., 2016; Saggat and Singh, 2017; Elgammal et al., 2018; Agyei-Mensah and Buerter, 2019).

From an agency theory perspective, Jensen (1993) suggests that the separation between CEO responsibilities and those of the chairman improves the extent of disclosure as it diminishes managers' opportunistic behaviour. More frequent board meetings also enhance the effectiveness of corporate governance mechanisms which are positively associated with disclosure quality (Firth et al., 2007). Additionally, stakeholder and agency theories predict that a large board is more likely to act for the best interests of shareholders as it is associated with greater diversity of expertise (Jensen and Meckling, 1976; Freeman, 1984). The two theories also suggest that the presence of independent non-executive directors improves the interest alignment between managers and shareholders. In practice, many prior empirical studies employ board size and board independence as the determining factors of disclosure.

Besides board characteristics, audit quality has been highlighted as an important corporate governance factor in prior research due to its effective role in constraining earnings management. There are some measures of audit quality that have been employed in previous disclosure studies. Abad and Bravo (2018) suggest that the presence of accounting experts in the audit committee enhances audit expertise and effectiveness, and a greater number of audit committee

members increases the likelihood of a firm having an accounting expert. Other studies find that the presence of a reputable external auditor may also contribute to a strong monitoring system and therefore positively influences disclosure (Oliveira et al., 2011; Elshandidy et al., 2013; Ntim et al., 2013; Qu et al., 2015; Salem et al., 2019). This is consistent with the prediction of agency theory (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). As an international auditing firm, a Big4 auditor has incentives to encourage their clients to provide more information to maintain its reputation and avoid litigation costs in the local market. The presence of a Big4 auditor, in turn, adds credibility to a firm's reporting and consequently enhance the firm's growth opportunity.

After considering the availability of corporate governance information in ASEAN countries, three corporate governance factors are chosen in this thesis, including board size (defined as the number of board members), board independence (as measured by the percentage of independent non-executive directors) and external auditor type (as proxied by a dummy variable which equates 1 if the external auditor is a Big-4 auditing firm, and 0 otherwise).

### *Country characteristics*

Country characteristics have been found to significantly influence corporate reporting practice. La Porta et al. (1998) suggest that the legal system in a country reflects its legal origins and the values it inherits from its historical regulatory development. Ding et al. (2007) emphasize that firms adhere to accounting policies in their home country, which determines the level of details and the quality of corporate communication. According to Elshandidy et al. (2015), firms in a common law system are more likely to prioritize transparency and therefore have more incentives for voluntary disclosure. Adversely, mandatory disclosure tends to dominate voluntary disclosure in a civil law country which prioritises compliance and enforcement. This thesis therefore employs a dummy variable to classify ASEAN countries into common law and civil law systems. Additionally, Ntim et al. (2012b) emphasizes that firms in developing stock markets may face more severe information asymmetry due to the immature regulatory system and poor legal enforcement. In this thesis, The World Bank classification of countries based on



economic development level is employed to develop a categorical variable which equals 2 if high-income, 1 if upper middle income and 0 if lower middle income.

#### **4.5.2.2. Additional control variables when examining stock market implications of disclosure**

The control variables specified in Section 4.5.2.1 are also employed in the regression model which examines stock market consequences of disclosure because previous studies show that firm characteristics and corporate governance factors affect managerial decision-making; hence, share prices (Lang and Lundholm, 1993; Attig et al., 2006; Chordia et al., 2007; Cormier et al., 2011; Elshandidy and Neri, 2015; Bravo, 2016; Schoenfeld, 2017; Cho and Kim, 2021). Additional control variables, including trading volume, earnings to price ratio, stock beta and market return volatility are included due to their potential influence on stock prices and returns.

The extant literature suggests that trading volume is an important proxy for the divergence of investors' opinions. Kravet and Muslu (2013) posit that trading volume is more likely to increase (decrease) if information disclosure reduces (increases) the range of investors' estimations. This factor has been controlled in previous studies when examining stock market implications of disclosure (Ascioglu et al., 2005; Akrouf and Othman, 2015; Xu and Liu, 2018). Moreover, risky firms may have incentives to voluntarily disclose more information to avoid investors' misunderstanding of their financial situation (Deumes, 2008). Leuz and Verrecchia (2000) further explain that investors impose higher monitoring costs to compensate higher uncertainty caused by increased systematic risks. Stock beta is widely used to control for firm risk in previous studies (Cormier et al., 2011; Elshandidy et al., 2013; Elshandidy and Neri, 2015; Xu and Liu, 2018). As investors tend to associate high earnings yields with good investment opportunities, the earnings-to-price ratio is also included in the regressions as suggested in Clement et al. (2003) and Athanasakou and Hussainey (2004). Finally, non-systematic risk, as proxied by market return volatility, is also controlled as other market-wide economic factors may also influence investors' trading behaviour. This is consistent with prior studies such as Leuz and Verrecchia (2000), Kravet and Muslu (2013), Elshandidy

and Neri (2015). Table 4.7 below shows the full list of control variables in this thesis.

**Table 4.7. Summary of control variables**

| <b>Variable name</b> | <b>Variable definition</b>  |
|----------------------|---|
| Firmsize             | The ratio between a firm's total assets and the country's total assets  |
| Growth               | The year-on-year percentage change in sales revenue   |
| Leverage             | The ratio between total long-term debts to shareholders' equity   |
| Liquidity            | The ratio between current assets and current liabilities  |
| Profitability        | Return on total assets  |
| Auditor              | The type of external auditor; equals 1 if a Big4 auditor, 0 if a non-Big4 auditor   |
| Boardsize            | The number of directors in the board  |
| Independence         | The percentage of independent non-executive directors in the board  |
| Country_income       | The level of a country's income based on World Bank classification; equals 2 if high-income, 1 if upper middle-income, 0 if lower middle-income   |
| Country_legal        | The legal system; equal 1 if common law; 0 if civil law   |
| Ln_Volume            | Natural logarithm of the average stock trading volume in Pounds sterling over a 12-month period starting four months after the financial year end |
| EP                   | The ratio between earnings per share and stock price four months after the financial year end   |
| Beta                 | The 12-month average stock beta starting four months after the financial year end   |
| Mvolatility          | The 12-month standard deviation of market daily returns starting four months after the financial year end   |

#### **4.5.2.3. Multicollinearity check**

In multiple regression, multicollinearity problem arises when independent variables are highly correlated. When the main interest of the researcher is on the explanatory power of independent variables on the dependent variables, high correlation among independent variables lead to less reliable inferences. Treiman (2009, p.108) explains that regression coefficients tend to have large standard deviations under the condition of multicollinearity. Therefore, small changes in the distribution of the data are likely to inflate in the magnitude of coefficients. While a large number of independent variables enhance the model's predictability of the dependent variable, it simultaneously increases the likelihood of multicollinearity. Buuren et al. (1999, p.687) suggest that the number of variables in a multiple regression equation should be limited from 15 to 25 to avoid multicollinearity and computational issues.

Martin and Bridgmon (2012) explain multicollinearity problem as the redundancy of several pairs of variables in explaining the dependent variable. These redundant variables complicate the interpretation of actual relationships among the variables of interest. An example is used to illustrate that the bivariate correlation coefficients between predictor variables do not reflect the possibility of multicollinearity (Martin and Bridgmon, 2012, p.413). Variance Inflation Factor (VIF) is generally used to detect multicollinearity in multiple regression. This is the coefficient of determination (R-squared) for the regression between one independent variable with remaining independent variables (Treiman, 2009, p.108). The lower the VIF, the lower correlation between a pair of independent variables. In common practice, there should not be a multicollinearity concern if VIFs are below 5. When VIFs are greater than 10, multicollinearity issues are of greater concern and must be addressed (Martin and Bridgmon, 2012, p.414). In this thesis, VIFs are obtained for all independent variables to detect possible multicollinearity problems. The results are later presented and discussed in the empirical chapters of the thesis.

## **4.6. Econometric modelling techniques**

Univariate, bivariate and multivariate analyses are widely used in the existing literature to discover the impact of firm characteristics on disclosure (Hussainey et al., 2003; Li, 2006; Abraham and Cox, 2007; Aljifri and Hussainey, 2007; Beretta and Bozzolan, 2008; Bozzolan et al., 2009; Schleifer and Walker, 2010; Li, 2010; Al-Najjar and Hussainey, 2011; Miihkinen, 2012; Elshandidy et al., 2013; Elshandidy and Neri, 2015; Elshandidy et al., 2015; Muslu et al., 2015) and the stock market effects of disclosure (Ascioglu et al., 2005; Attig et al., 2006; Kothari et al., 2009; Cormier et al., 2011; Ascioglu et al., 2012; Athanasakou and Hussainey, 2014; Boubaker et al., 2019; Hassanein et al., 2019). In this thesis, the three analyses are performed to answer the research questions specified in Section 1.3 of Chapter 1. To answer the first research question, descriptive statistics, as a typical univariate analysis, help to evaluate the extent of forward-looking (risk) disclosure by ASEAN listed firms. To answer the second research question, the bivariate and multivariate analyses help to examine the relationship between forward-looking (risk) disclosure (dependent variable) and ownership structure (independent variable). To answer the third question, these analyses are performed to discover the impact of disclosure (independent variable) on stock returns, stock volatility and stock liquidity (dependent variable).

### **4.6.1. Univariate and bivariate analyses**

According to Adams (2014), descriptive statistics helps us to understand and summarise data. Therefore, firstly a univariate analysis is performed to obtain descriptive statistics of all variables employed in this thesis. This includes mean, median, maximum, minimum and standard deviation of each variable. For disclosure variables, these figures help to evaluate and compare the extent of forward-looking and risk disclosure among ASEAN listed firms. For ownership variables, descriptive statistics provides an overview of ownership structure and compare the shareholdings of different ownership identities in ASEAN firms. For stock market indicators, this analysis allows the researcher to evaluate stock performance among ASEAN firms. Descriptive statistics for control variables help the researcher understand the characteristics of ASEAN firms and countries.

Descriptive statistics is also presented by year, country, and industry so that the trend over the study period and differences among ASEAN countries can be discussed.

To discover the strength of correlation between pairs of variables, a bivariate analysis is conducted. According to Adams (2014), Pearson correlation matrix is widely used in business studies to obtain the coefficient of correlation between two variables which ranges from -1 to 1. The sign and magnitude of the coefficient indicates the strength and direction of the relationship. In this study, Pearson correlation matrix is performed to obtain the coefficient of correlation between forward-looking (risk) disclosure (dependent variable) and each individual ownership variable (independent variable) and the coefficient of correlation between stock market indicators (dependent variable) and forward-looking (risk) disclosure (independent variable). However, Paterson et al. (2016) suggests that a multivariate analysis is more reliable as a dependent variable should normally be explained by different independent variables rather than only one variable due to the complicated nature of business phenomenon.

#### **4.6.2. Multivariate analysis**

Multivariate analysis is involved with testing the relationship between a dependent variable and a combined set of independent variables. Paterson et al. (2016) explains that interrelationships between a large number of variables can be discovered by multiple regression. Thereby, it reveals the association between a dependent variable and independent variables while controlling for other variables which also affect the dependent variable such as firm size, firm age, and industry. This type of regression is therefore more realistic and able to deal with more complex issues in the real world.

Fixed and random effect regression techniques are commonly used to estimate the parameters of a multiple regression model using panel data. These two techniques control for unobserved variables in panel data to avoid the bias of estimators (Stock and Watson, 2015, p.403). Some omitted variables vary across entities but remain constant over time while some the others change over time but remain the

same among entities. Fixed effect regression assumes that the effect of unobserved variables across entities and over time is common or fixed while random effect regression assumes that such effect is not the same across entities and over time. Hausman test is used to decide whether fixed effect regression and random effect regression is more suitable for the data (Baltagi, 2008, p.320; Gujarati, 2004, p.652).

Apart from the explanatory variables chosen in this study, the extent of disclosure is also affected by other factors which can be divided into company-specific characteristics (such as managerial talent, corporate culture, organisational complexity) and time-varying factors (such as industry competition, investment intensity, national policies, business culture and customs). These unobserved variables can jointly and dynamically determine the extent of disclosure provided by firms and therefore potentially cause endogeneities and bias the estimates (Petersen, 2009; Larcker and Rusticus, 2010). Consequently, a fixed-effect regression model is employed in this thesis to control for company and year effects. The model is also controlled for industry effects by clustering standard errors at the industry level to account for heteroscedasticity. The Hausman test result, summarised in Appendix G, supports that the fixed-effect regression technique is more suitable than the random-effect for the panel data employed in this thesis.

Furthermore, country characteristics should also be considered when running the regressions. As discussed in Section 2.2.3, 2.2.4 and 2.3 of Chapter 2, ASEAN countries are largely different in terms of legal system and economic development. A strong legal system is associated with high perceptions of legitimacy which influence firms' incentives and behaviour towards disclosing information (Judge et al., 2008). Moreover, La Porta et al. (1998) suggest that firms under a common law system are more transparent and give a higher priority to protecting investors while firms in a civil law system tend to be more secretive and prioritize the rights of creditors. Besides, the economic development divide among ASEAN countries may also affect corporate disclosure through the availability of national resources for developing the stock market. As these factors remain constant over time during

the study period, they are collinear with other firm characteristics and therefore are wiped out from the fixed effect model. To examine the differences in corporate disclosure practice among ASEAN countries, the regression analysis is run for the subgroups of countries divided by legal system (common law and civil law) and by the World Bank ranking of economic development (high income, upper middle income, and lower middle income).

#### 4.6.2.1. The regression model for the effect of ownership on disclosure

In this model, disclosure is the dependent variable while four measures of ownership identities are independent variables. The disclosure variables including overall level of forward-looking (risk) disclosure, themes of forward-looking disclosure, tone of forward-looking disclosure, qualitative dimensions of risk disclosure and tone of risk disclosure are run separately to examine the effect of ownership on each type or each dimension of disclosure. As the effect of ownership on disclosure in annual reports may not be immediate, 1-year lagged ownership variables are included in the regression model. This also mitigates the endogeneity problem caused by potential reverse causality between ownership and disclosure. Control variables in this model include firm characteristics, corporate governance factors, country factors, year, company and industry effects. Equation (4.1) below represents the linear regression model while equation (4.2) represents the non-linear regression model.

$$Disclosure_{i,t} = \beta_0 + \beta_1 Institution_{i,t-1} + \beta_2 Foreign_{i,t-1} + \beta_3 Manager_{i,t-1} + \beta_4 Government_{i,t-1} + Control\ variables + Year\ dummies + Industry\ dummies + \gamma_i + \mu_{i,t} \quad (4.1)$$

$$Disclosure_{i,t} = \beta_0 + \beta_1 Institution_{i,t-1} + \beta_2 Foreign_{i,t-1} + \beta_3 Manager_{i,t-1} + \beta_4 Government_{i,t-1} + \beta_5 Institution_{i,t-1}^2 + \beta_6 Foreign_{i,t-1}^2 + \beta_7 Manager_{i,t-1}^2 + \beta_8 Government_{i,t-1}^2 + Control\ variables + Year\ dummies + Industry\ dummies + \gamma_i + \mu_{i,t} \quad (4.2)$$

Where:

$i$  = A number that uniquely identifies each company, i.e.,  $i = \{1, 2, 3, \dots, 795\}$

$t$  = year of operation, i.e.,  $t = \{2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016$  and  $2017\}$

Disclosure = forward-looking disclosure/risk disclosure variables

Institution = the percentage of shares held by institutional shareholders

Foreign = the percentage of shares held by foreign shareholders

Manager = the percentage of shares held by managers

Government = the percentage of shares held by government

Control variables include firm characteristics (firm size, growth, leverage, liquidity, profitability, annual report length), corporate governance factors (type of auditor, board size, board independence) and country factors (legal system, income level).

$\gamma_i$ : the company fixed effects;  $\mu_{i,t}$ : the error term for firm  $i$  in year  $t$ .

#### **4.6.2.2. The regression model for stock market implications of disclosure**

In this model, stock variables are dependent variables while disclosure variables are independent variables. The four measures of stock market implications including buy-and-hold return, abnormal return, stock volatility and stock liquidity are included one by one. The regression is run separately for the overall level of disclosure and each subcategory or dimension of disclosure to compare market reactions to characteristics of disclosure. This model includes control variables including stock market indicators, firm characteristics, corporate governance factors, year, company, and industry effects. Equation (4.3) below represents this regression model.

$$\begin{aligned} \text{Stock variables}_{i,t} = & \beta_0 + \beta_1 \text{Disclosure}_{i,t} + \text{Control variables} + \text{Year dummies} + \\ & \text{Industry dummies} + \gamma_i + \mu_{i,t} \end{aligned} \quad (4.3)$$

Where:

$i$  = A number that uniquely identifies each company, i.e.,  $i = \{1, 2, 3, \dots, 795\}$

$t$  = year of operation, i.e.,  $t = \{2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016$  and  $2017\}$



Stock variables = annual buy-and-hold return/ abnormal return/ stock return volatility/ stock liquidity

Disclosure = forward-looking/risk disclosure variables

Control variables include stock market indicators (trading volume, earnings-to-price ratio, stock beta, market volatility), firm characteristics (firm size, growth, leverage, liquidity, profitability, ownership, annual report length), corporate governance factors (type of auditor, board size, board independence), year and industry effects.

$\gamma_i$ : the company fixed effects;  $\mu_{i,t}$ : the error term for firm  $i$  in year  $t$ .

#### **4.7. Summary**

This chapter introduces and discusses the research approach and research method adopted in this thesis to address the research questions specified in Chapter 1. Based on the researchers' assumptions, a positivist research paradigm is chosen. This leads to the application of quantitative research methods in testing disclosure-related theories. For the input of quantitative research methods, secondary data is obtained from ASEAN listed firms' annual reports and Bloomberg database. To prepare for the textual analysis, text data in annual report narratives are manually pre-processed. In addition, this chapter explains the development of wordlists which are used in the automated text searches in QSR NVivo 12 software. The result of these text searches is the frequency of sentences (words) as the measure of disclosure in this study. The whole procedure of the textual analysis has been fully described. Based on a methodological review, this chapter then discusses the quantitative research techniques to analyse the panel data. A comprehensive set of statistical analysis techniques is employed to discover the relationship between variables, including univariate, bivariate and multivariate regressions. Empirical results are to be discussed in Chapter 5, 6 and 7.

## CHAPTER 5: EMPIRICAL FINDINGS ABOUT THE IMPACT OF OWNERSHIP STRUCTURE ON FORWARD-LOOKING DISCLOSURE IN ASEAN LISTED FIRMS

### 5.1. Introduction

In this chapter, regression results for the impact of ownership structure on forward-looking disclosure in ASEAN listed firms are reported and discussed. The chapter begins with providing descriptive statistics of variables, among those of forward-looking disclosure and ownership variables are discussed by country and year. This section is followed by a bivariate analysis of all variables to discover potential statistical association between forward-looking disclosure and ownership structure as well as to detect possible multicollinearity issues. Regression results are then reported for the ownership impact on the overall level, the themes and the tone of forward-looking disclosure; hence, research question 1 - *To what extent do ASEAN country listed companies disclose forward-looking and risk information?* and research question 2 - *How does the level of forward-looking and risk information in annual report narratives vary with ownership types in ASEAN country listed companies?* are answered. The hypotheses developed in Section 3.4.1 of Chapter 3 are tested in this chapter, including hypotheses 1a, 2a, 3a, 4a regarding the linearity between institutional, foreign, managerial and government ownership and the extent of forward-looking disclosure respectively, and 1c, 2c, 3c, 4c regarding the nonlinearity between the four ownership variables and the extent of forward-looking disclosure respectively. To further investigate how the differences among ASEAN countries affect the ownership-disclosure association, the regression models are run for ASEAN countries grouped by legal system and income level.

## **5.2. Descriptive statistics**

### **5.2.1. Descriptive statistics of forward-looking disclosure variables**

Table 5.1 shows that there is an average of 58 forward-looking sentences in annual reports issued by ASEAN firms but the amount of forward-looking information varies across firms, indicated by a high standard deviation. Forward-looking disclosure contains more information about financial performance and corporate environment than strategy and structure. This indicates that ASEAN firms use annual reports to inform shareholders more of future financial performance and business environment while the other topics might be perceived as sensitive and associated with high proprietary costs. However, high standard deviations show different disclosure patterns among ASEAN firms. The tone of forward-looking disclosure is more positive than negative. On average, positive words are almost double negative words, implying the dominance of good news over bad news in forward-looking statements. The aggregate tone of forward-looking disclosure is 0.28 on average with a median of 0.31 and standard deviation of 0.36. By construction, a net tone value of zero means tone neutrality as the number of positive words equates the number of negative words. The result suggests that the net tone of forward-looking disclosure in ASEAN firms' annual reports is altogether more positive than negative. This is consistent with other studies which suggest that corporate narratives tend to be biased towards positive (Henry and Leone, 2006; Kothari et al., 2009; Feldman et al., 2010; Schleicher and Walker, 2010; Price et al., 2012).

Table 5.1 also displays descriptive statistics for forward-looking information as measured by proportions. On average, forward-looking sentences account for 5.82% of the annual report, with a median of 5.62%. As ASEAN firms do not have a separate forward-looking section in their annual reports, the figures show that forward-looking information is relatively spread over an annual report with approximately 6 in every 100 sentences. Given the large size of an annual report compared to other forms of corporate communication, the low means of forward-looking disclosure measures imply the predominance of backward-looking or non-

time specific information in corporate narratives, as reported in previous studies such as Clatworthy and Jones (2003) and Schleicher and Walker (2010).

Percentages of theme and tone words are generally low, ranging from 0.02% to 0.04%, suggesting that forward-looking information disclosed in ASEAN firms' annual reports may be mainly generic and neutral. Consistent with the descriptive statistics for the counts, the topics of financial performance and corporate environment are relatively discussed more than the remaining topics. This is in line with the findings in Bozzolan et al. (2009) that firms tend to provide more general information about the surrounding environment than specific and verifiable information in annual reports. Muslu et al. (2015) also indicate that forward-looking statements in 10-K filings are overwhelmingly related to financial performance. The proportion of positive words is approximately as twofold as that of negative words, which is also consistent the results for the counts. Forward-looking disclosure levels largely vary across ASEAN firms, indicated by high standard deviations.

**Table 5.1. Descriptive statistics of forward-looking disclosure variables**

|               | Variable                 | Obs.  | Mean  | Median | Std. Dev. | Min   | Max    |
|---------------|--------------------------|-------|-------|--------|-----------|-------|--------|
| Overall level | Forwlook_count           | 6,569 | 57.57 | 43.5   | 48.76     | 2     | 745    |
|               | Forwlook_percent         | 6,569 | 5.82% | 5.62%  | 2.46%     | 0.62% | 18.46% |
| Themes        | Financial_count          | 6,569 | 11.18 | 7      | 17.32     | 0     | 437    |
|               | Financial_percent        | 6,569 | 0.04% | 0.04%  | 0.04%     | 0.00% | 0.78%  |
|               | Strategy_count           | 6,569 | 6.48  | 4      | 9.61      | 0     | 250    |
|               | Strategy_percent         | 6,569 | 0.02% | 0.02%  | 0.02%     | 0.00% | 0.28%  |
|               | Structure_count          | 6,569 | 8.84  | 6      | 9.97      | 0     | 128    |
|               | Structure_percent        | 6,569 | 0.04% | 0.03%  | 0.03%     | 0.00% | 0.29%  |
|               | Corenvi_count            | 6,569 | 13.12 | 9      | 13.71     | 0     | 163    |
|               | Corenvi_percent          | 6,569 | 0.05% | 0.05%  | 0.04%     | 0.00% | 0.65%  |
| Tone          | Forwlookpositive_count   | 6,569 | 21.07 | 15     | 19.64     | 0     | 323    |
|               | Forwlookpositive_percent | 6,569 | 0.11% | 0.09%  | 0.07%     | 0.00% | 0.91%  |
|               | Forwlooknegative_count   | 6,569 | 11.67 | 8.33   | 13.69     | 0     | 296    |
|               | Forwlooknegative_percent | 6,569 | 0.06% | 0.05%  | 0.05%     | 0.00% | 0.85%  |
|               | Forwlook_tone            | 6,564 | 0.28  | 0.31   | 0.36      | -1    | 1      |

Notes: *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences.

When forward-looking disclosure is viewed by country, listed firms in Indonesia use an average of 80 sentences discussing about forward-looking information in their

annual reports, which is the highest among countries (Table 5.2). This figure is closely followed by Thailand and Vietnam with 64 sentences and 61 sentences respectively. Malaysian firms provide relatively lower amount of forward-looking information with around 56 sentences per report. The two remaining countries, Philippines and Singapore have a much lower average of above 40 sentences. Standard deviations indicate that the level of forward-looking disclosure is largely different among firms in each country.

However, when forward-looking information is measured in relative terms, Malaysian firms have the highest forward-looking disclosure level with an average 7.26% of the whole annual report, followed by firms in Vietnam (7.05%) and Singapore (6.49%). Given the large proportion of Malaysia and Singapore listed firms in the sample, these statistics are consistent with expected high levels of disclosure in ASEAN common-law countries which exhibit better governance and transparency than the other country members, as discussed in Section 2.2.4 and 2.5 of Chapter 2. This is also in line with Ntim et al. (2012b) and Elshandidy et al. (2015) that firms in developed markets are more inclined to transparent practice whereas firms in developing economies are associated with a poor informational environment. While Indonesian firms have the highest average count of sentences, they have the least average proportion of forward-looking sentences as their annual reports are relatively longer. The opposite is reported for Singaporean firms which have a low average count but a high average proportion. The differences between the two measures of disclosure suggest that a greater count of sentences (words) does not necessarily mean a greater relative amount of information discussed in an annual report. Firms may intentionally dilute or intensify the level of forward-looking information to attract readers to specific favourable topics while distracting them from unfavourable information.

By theme, the descriptive statistics show that corporate environment is the most common forward-looking topic in Indonesia, Malaysia, Singapore, and Thailand. Firms in these countries may prefer discussing about the external business environment to internal information like strategies or business structure in their forward-looking statements. Vietnamese firms, however, mention more about

financial matters in their annual reports than corporate environment. They may have more incentives to explain their financial performance and provide earnings forecasts in annual reports. Meanwhile, forward-looking information is more equally distributed across themes in Philippines. Among the four themes, strategy is the least discussed topic by ASEAN firms, implying their sensitiveness to proprietary costs associated with strategic management or their limited competence in future planning. The prevailing tone of forward-looking disclosure is positive in all countries.

**Table 5.2. Descriptive statistics of forward-looking variables by country**

|  | Indonesia (N=1,068)      |        |           |       |         | Singapore (N=1,714)      |        |           |       |        |
|--|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|--------|
|  | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max    |
|  | Forwlook_count           | 80.18  | 81.5      | 3     | 745     | Forwlook_count           | 41.18  | 28.48     | 5     | 263    |
|  | Forwlook_percent         | 3.27%  | 1.47%     | 0.62% | 11.77%  | Forwlook_percent         | 6.49%  | 2.00%     | 1.74% | 18.46% |
|  | Financial_count          | 17.99  | 34.51     | 0     | 437     | Financial_count          | 7.38   | 10.85     | 0     | 141    |
|  | Financial_percent        | 0.03%  | 0.02%     | 0.00% | 0.16%   | Financial_percent        | 0.05%  | 0.05%     | 0.00% | 0.54%  |
|  | Strategy_count           | 13.16  | 17.99     | 0     | 250     | Strategy_count           | 2.64   | 3.37      | 0     | 44     |
|  | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.18%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.16%  |
|  | Structure_count          | 15.08  | 15.24     | 0     | 128     | Structure_count          | 5.67   | 5.76      | 0     | 55     |
|  | Structure_percent        | 0.03%  | 0.02%     | 0.00% | 0.17%   | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.28%  |
|  | Corenvi_count            | 19.26  | 21.01     | 0     | 163     | Corenvi_count            | 8.74   | 8.32      | 0     | 76     |
|  | Corenvi_percent          | 0.04%  | 0.02%     | 0.00% | 0.21%   | Corenvi_percent          | 0.06%  | 0.04%     | 0.00% | 0.47%  |
|  | Forwlookpositive_count   | 31.05  | 28.91     | 0     | 323     | Forwlookpositive_count   | 14     | 10.88     | 0     | 86     |
|  | Forwlookpositive_percent | 0.07%  | 0.04%     | 0.00% | 0.42%   | Forwlookpositive_percent | 0.12%  | 0.07%     | 0.00% | 0.91%  |
|  | Forwlooknegative_count   | 14.35  | 24.65     | 0     | 296     | Forwlooknegative_count   | 10.55  | 8.52      | 0     | 85     |
|  | Forwlooknegative_percent | 0.03%  | 0.03%     | 0.00% | 0.26%   | Forwlooknegative_percent | 0.10%  | 0.07%     | 0.00% | 0.85%  |
|  | Forwlook_tone            | 0.44   | 0.33      | -1    | 1       | Forwlook_tone            | 0.14   | 0.39      | -1    | 1      |
|  | Reportsize               | 26,375 | 26,609    | 624   | 223,604 | Reportsize               | 14,653 | 8,502     | 2,275 | 62,620 |
|  | Malaysia (N=2,149)       |        |           |       |         | Thailand (N=1,273)       |        |           |       |        |
|  | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max    |
|  | Forwlook_count           | 56.37  | 40.08     | 7     | 294     | Forwlook_count           | 64.05  | 40.61     | 2     | 260    |
|  | Forwlook_percent         | 7.26%  | 2.22%     | 1.95% | 16.76%  | Forwlook_percent         | 4.48%  | 1.64%     | 0.82% | 11.74% |
|  | Financial_count          | 9.26   | 8.97      | 0     | 164     | Financial_count          | 13.53  | 11.69     | 0     | 114    |
|  | Financial_percent        | 0.05%  | 0.03%     | 0.00% | 0.31%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.39%  |
|  | Strategy_count           | 4.84   | 5.21      | 0     | 85      | Strategy_count           | 8.46   | 7.67      | 0     | 55     |
|  | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.15%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.09%  |
|  | Structure_count          | 7.79   | 8.74      | 0     | 77      | Structure_count          | 9.63   | 8.97      | 0     | 68     |
|  | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.27%   | Structure_percent        | 0.03%  | 0.02%     | 0.00% | 0.18%  |
|  | Corenvi_count            | 11.24  | 9.94      | 0     | 81      | Corenvi_count            | 18.09  | 15.07     | 0     | 133    |
|  | Corenvi_percent          | 0.06%  | 0.03%     | 0.00% | 0.27%   | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.24%  |
|  | Forwlookpositive_count   | 20.49  | 19.01     | 0     | 140     | Forwlookpositive_count   | 23.94  | 17.64     | 0     | 134    |
|  | Forwlookpositive_percent | 0.12%  | 0.06%     | 0.00% | 0.44%   | Forwlookpositive_percent | 0.08%  | 0.05%     | 0.00% | 0.36%  |
|  | Forwlooknegative_count   | 9.79   | 8.62      | 0     | 96      | Forwlooknegative_count   | 15.44  | 13.8      | 0     | 109    |
|  | Forwlooknegative_percent | 0.06%  | 0.04%     | 0.00% | 0.39%   | Forwlooknegative_percent | 0.05%  | 0.04%     | 0.00% | 0.30%  |
|  | Forwlook_tone            | 0.31   | 0.34      | -1    | 1       | Forwlook_tone            | 0.23   | 0.30      | -1    | 1      |
|  | Reportsize               | 19,029 | 11,939    | 5,934 | 94,779  | Reportsize               | 32,121 | 16,494    | 1,986 | 96,361 |
|  | Philippines (N=189)      |        |           |       |         | Vietnam (N=176)          |        |           |       |        |
|  | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max    |
|  | Forwlook_count           | 44.8   | 33.85     | 4     | 209     | Forwlook_count           | 61.28  | 39.75     | 13    | 248    |
|  | Forwlook_percent         | 5.53%  | 1.89%     | 1.53% | 11.20%  | Forwlook_percent         | 7.05%  | 2.43%     | 2.15% | 16.83% |
|  | Financial_count          | 6.9    | 8.57      | 0     | 54      | Financial_count          | 17.99  | 14.45     | 2     | 82     |
|  | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.23%   | Financial_percent        | 0.11%  | 0.07%     | 0.01% | 0.78%  |
|  | Strategy_count           | 4.58   | 5.01      | 0     | 24      | Strategy_count           | 11.16  | 9.59      | 0     | 58     |
|  | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.07%   | Strategy_percent         | 0.05%  | 0.04%     | 0.00% | 0.28%  |
|  | Structure_count          | 7.13   | 6.45      | 0     | 38      | Structure_count          | 10.75  | 8.14      | 0     | 64     |
|  | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.27%   | Structure_percent        | 0.08%  | 0.05%     | 0.00% | 0.29%  |
|  | Corenvi_count            | 6.73   | 6.27      | 0     | 36      | Corenvi_count            | 12.47  | 9.67      | 0     | 45     |
|  | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.36%   | Corenvi_percent          | 0.08%  | 0.07%     | 0.00% | 0.65%  |
|  | Forwlookpositive_count   | 17.95  | 13.33     | 1     | 82      | Forwlookpositive_count   | 19.14  | 12.73     | 0     | 65     |
|  | Forwlookpositive_percent | 0.16%  | 0.11%     | 0.01% | 0.83%   | Forwlookpositive_percent | 0.15%  | 0.11%     | 0.00% | 0.57%  |
|  | Forwlooknegative_count   | 5.72   | 5.88      | 0     | 32      | Forwlooknegative_count   | 8.41   | 5.56      | 0     | 30     |
|  | Forwlooknegative_percent | 0.04%  | 0.03%     | 0.00% | 0.20%   | Forwlooknegative_percent | 0.07%  | 0.05%     | 0.00% | 0.28%  |
|  | Forwlook_tone            | 0.54   | 0.31      | -0.5  | 1       | Forwlook_tone            | 0.31   | 0.34      | -1    | 1      |
|  | Reportsize               | 17,409 | 12,696    | 2,197 | 62,337  | Reportsize               | 17,315 | 8,851     | 3,939 | 68,384 |

Notes: *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Reportsize* is the natural logarithm of the total wordcount in the annual report.

**Table 5.3. Descriptive statistics of forward-looking variables by year**

|  | Year 2009 (N=651)        |        |           |       |         | Year 2010 (N=683)        |        |           |       |         | Year 2011 (N=703)        |        |           |       |         | Year 2013 (N=749)        |        |           |       |         | Year 2014 (N=761)        |        |           |       |         | Year 2015 (N=770)        |        |           |       |         |
|--|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|
|  | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     |
|  | Forwlook_count           | 48     | 47        | 4     | 560     | Forwlook_count           | 51     | 50        | 2     | 745     | Forwlook_count           | 52     | 47        | 4     | 424     | Forwlook_count           | 57     | 48        | 4     | 485     | Forwlook_count           | 59     | 47        | 4     | 424     | Forwlook_count           | 61     | 48        | 4     | 351     |
|  | Forwlook_percent         | 5.75%  | 2.59%     | 0.82% | 17.35%  | Forwlook_percent         | 5.84%  | 2.36%     | 0.71% | 15.75%  | Forwlook_percent         | 5.95%  | 2.52%     | 1.20% | 16.06%  | Forwlook_percent         | 5.81%  | 2.38%     | 0.67% | 16.85%  | Forwlook_percent         | 5.84%  | 2.48%     | 0.62% | 18.46%  | Forwlook_percent         | 5.74%  | 2.38%     | 0.91% | 13.97%  |
|  | Financial_count          | 10     | 17        | 0     | 204     | Financial_count          | 10     | 18        | 0     | 306     | Financial_count          | 10     | 17        | 0     | 289     | Financial_count          | 12     | 17        | 0     | 195     | Financial_count          | 11     | 15        | 0     | 172     | Financial_count          | 11     | 15        | 0     | 210     |
|  | Financial_percent        | 0.05%  | 0.05%     | 0.00% | 0.78%   | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.31%   | Financial_percent        | 0.05%  | 0.04%     | 0.00% | 0.44%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.54%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.24%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.39%   |
|  | Strategy_count           | 5      | 8         | 0     | 70      | Strategy_count           | 5      | 8         | 0     | 89      | Strategy_count           | 5      | 8         | 0     | 88      | Strategy_count           | 6      | 9         | 0     | 101     | Strategy_count           | 7      | 8         | 0     | 79      | Strategy_count           | 7      | 11        | 0     | 114     |
|  | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.28%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.17%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.11%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.12%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.09%   | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.18%   |
|  | Structure_count          | 7      | 9         | 0     | 62      | Structure_count          | 8      | 9         | 0     | 74      | Structure_count          | 8      | 9         | 0     | 86      | Structure_count          | 9      | 10        | 0     | 77      | Structure_count          | 9      | 10        | 0     | 68      | Structure_count          | 9      | 10        | 0     | 71      |
|  | Structure_percent        | 0.04%  | 0.04%     | 0.00% | 0.28%   | Structure_percent        | 0.04%  | 0.04%     | 0.00% | 0.29%   | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.21%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.19%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.27%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.27%   |
|  | Corenvi_count            | 11     | 13        | 0     | 135     | Corenvi_count            | 11     | 13        | 0     | 140     | Corenvi_count            | 11     | 12        | 0     | 120     | Corenvi_count            | 13     | 13        | 0     | 110     | Corenvi_count            | 13     | 13        | 0     | 110     | Corenvi_count            | 14     | 13        | 0     | 106     |
|  | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.31%   | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.25%   | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.28%   | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.65%   | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.25%   | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.36%   |
|  | Forwlookpositive_count   | 18     | 18        | 0     | 134     | Forwlookpositive_count   | 19     | 19        | 0     | 172     | Forwlookpositive_count   | 18     | 18        | 0     | 206     | Forwlookpositive_count   | 21     | 18        | 1     | 120     | Forwlookpositive_count   | 21     | 18        | 1     | 120     | Forwlookpositive_count   | 22     | 19        | 0     | 158     |
|  | Forwlookpositive_percent | 0.11%  | 0.08%     | 0.00% | 0.57%   | Forwlookpositive_percent | 0.11%  | 0.07%     | 0.00% | 0.66%   | Forwlookpositive_percent | 0.11%  | 0.07%     | 0.00% | 0.55%   | Forwlookpositive_percent | 0.10%  | 0.06%     | 0.01% | 0.83%   | Forwlookpositive_percent | 0.10%  | 0.06%     | 0.01% | 0.83%   | Forwlookpositive_percent | 0.10%  | 0.06%     | 0.00% | 0.48%   |
|  | Forwlooknegative_count   | 10     | 15        | 0     | 293     | Forwlooknegative_count   | 9      | 15        | 0     | 296     | Forwlooknegative_count   | 11     | 13        | 0     | 177     | Forwlooknegative_count   | 12     | 12        | 0     | 140     | Forwlooknegative_count   | 12     | 12        | 0     | 140     | Forwlooknegative_count   | 13     | 14        | 0     | 184     |
|  | Forwlooknegative_percent | 0.07%  | 0.06%     | 0.00% | 0.63%   | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.38%   | Forwlooknegative_percent | 0.07%  | 0.05%     | 0.00% | 0.34%   | Forwlooknegative_percent | 0.06%  | 0.06%     | 0.00% | 0.85%   | Forwlooknegative_percent | 0.06%  | 0.06%     | 0.00% | 0.85%   | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.56%   |
|  | Forwlook_tone            | 0.24   | 0.40      | -1    | 1       | Forwlook_tone            | 0.33   | 0.37      | -1    | 1       | Forwlook_tone            | 0.26   | 0.37      | -1    | 1       | Forwlook_tone            | 0.28   | 0.35      | -1    | 1       | Forwlook_tone            | 0.28   | 0.35      | -1    | 1       | Forwlook_tone            | 0.25   | 0.36      | -1    | 1       |
|  | Reportsize               | 17,780 | 15,376    | 805   | 165,891 | Reportsize               | 18,149 | 15,502    | 633   | 212,533 | Reportsize               | 18,525 | 15,096    | 805   | 165,891 | Reportsize               | 21,218 | 16,521    | 805   | 202,125 | Reportsize               | 21,867 | 15,966    | 956   | 165,891 | Reportsize               | 23,399 | 16,660    | 886   | 123,646 |



Table 5.3. Continued

|  | Year 2012 (N=728)        |        |           |       |         | Year 2016 (N=765)        |        |           |       |         | Year 2017 (N=759)        |        |           |       |         |
|--|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|
|  | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     |
|  | Forwlook_count           | 54     | 45        | 3     | 487     | Forwlook_count           | 65     | 49        | 4     | 424     | Forwlook_count           | 70     | 55        | 4     | 507     |
|  | Forwlook_percent         | 5.95%  | 2.57%     | 1.12% | 16.76%  | Forwlook_percent         | 5.71%  | 2.41%     | 0.70% | 13.60%  | Forwlook_percent         | 5.78%  | 2.43%     | 0.95% | 14.63%  |
|  | Financial_count          | 10     | 17        | 0     | 234     | Financial_count          | 12     | 16        | 0     | 154     | Financial_count          | 13     | 23        | 0     | 437     |
|  | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.29%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.26%   | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.33%   |
|  | Strategy_count           | 6      | 9         | 0     | 109     | Strategy_count           | 8      | 10        | 0     | 100     | Strategy_count           | 9      | 14        | 0     | 250     |
|  | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.16%   | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.13%   | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.13%   |
|  | Structure_count          | 8      | 9         | 0     | 84      | Structure_count          | 10     | 11        | 0     | 100     | Structure_count          | 11     | 12        | 0     | 128     |
|  | Structure_percent        | 0.04%  | 0.04%     | 0.00% | 0.24%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.18%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.22%   |
|  | Corenvi_count            | 12     | 13        | 0     | 105     | Corenvi_count            | 15     | 15        | 0     | 133     | Corenvi_count            | 17     | 17        | 0     | 163     |
|  | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.34%   | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.27%   | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.25%   |
|  | Forwlookpositive_count   | 20     | 20        | 1     | 171     | Forwlookpositive_count   | 24     | 20        | 0     | 130     | Forwlookpositive_count   | 26     | 24        | 1     | 323     |
|  | Forwlookpositive_percent | 0.11%  | 0.07%     | 0.01% | 0.91%   | Forwlookpositive_percent | 0.10%  | 0.06%     | 0.00% | 0.42%   | Forwlookpositive_percent | 0.11%  | 0.06%     | 0.01% | 0.48%   |
|  | Forwlooknegative_count   | 10     | 13        | 0     | 166     | Forwlooknegative_count   | 13     | 13        | 0     | 137     | Forwlooknegative_count   | 14     | 13        | 0     | 173     |
|  | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.31%   | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.37%   | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.39%   |
|  | Forwlook_tone            | 0.30   | 0.36      | -1    | 1       | Forwlook_tone            | 0.27   | 0.35      | -1    | 1       | Forwlook_tone            | 0.30   | 0.33      | -1    | 1       |
|  | Reportsize               | 19,487 | 15,165    | 624   | 181,348 | Reportsize               | 25,107 | 17,327    | 881   | 165,891 | Reportsize               | 26,971 | 19,809    | 854   | 223,604 |

Notes: *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Reportsize* is the natural logarithm of the total wordcount in the annual report.

When forward-looking disclosure is viewed by year (Table 5.3), the average amount of forward-looking information increases gradually between 2009 and 2017, suggesting that ASEAN firms steadily increase forward-looking disclosure over the nine-year period. This is in line with prior empirical evidence on the persistence of disclosure across years (Bushee et al., 2003; Skinner, 2003; Graham et al., 2005). While forward-looking information is relatively equally distributed to the topics of financial performance and corporate environment in 2009, the gap between the two topics widens in the following years. There is a trend that ASEAN firms discuss more about corporate environment than financial issues over years. The amount of structural and strategic information negligibly changes over the period, implying that ASEAN firms might aim at providing a minimum level of forward-looking information in these topics to meet investors' needs. The average number of positive words maintains two times higher than negative words from 2009 to 2017, providing more evidence on the dominance of positive forward-looking tone in ASEAN firms' annual reports.

Finally, Table 5.4 reports forward-looking disclosures by ASEAN firms classified by industry. In absolute terms, firms in Communications, Utilities and Energy sectors have higher means of forward-looking sentences while firms in Technologies sectors exhibit the lowest level of disclosure. In contrast, the highest average percentage of forward-looking sentences is reported for Industrials and Technologies sectors while the amount of forward-looking information in Communications sector is the lowest relative to the annual report length. For the other industries, forward-looking disclosure is within a narrow range of average 50 to 60 sentences and 5.2% to 5.8% of total sentences. The contradictory statistics reveal different disclosure patterns in different sectors. While firms in Communications sector focus more on specific future-related information, firms in Industrials and Technologies sectors pay more attention to the relative level of forward-looking information within the whole annual report. Moreover, forward-looking information in Communications sector is diluted in large annual reports which are nearly twofold longer than annual reports in other industries. The descriptive statistics are consistent with high forward-looking disclosures in industrials sectors in previous studies (Aljiri and Hussainey, 2007; Wang and

Hussainey, 2013; Qu et al., 2014) and in litigious industry environment such as technologies sector (Wang and Hussainey, 2013). In line with the above discussion, financial performance and corporate environment are the most common topics and the positive tone is dominant across industries.

**Table 5.4. Descriptive statistics of forward-looking variables by industry**

|  | Communications (N=327)           |        |           |       |         | Healthcare (N=211)       |        |           |       |         |
|--|----------------------------------|--------|-----------|-------|---------|--------------------------|--------|-----------|-------|---------|
|  | Variable                         | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     |
|  | Forwlook_count                   | 98     | 81        | 7     | 745     | Forwlook_count           | 60     | 50        | 11    | 263     |
|  | Forwlook_percent                 | 4.81%  | 1.82%     | 1.63% | 10.66%  | Forwlook_percent         | 5.29%  | 1.96%     | 1.23% | 10.19%  |
|  | Financial_count                  | 18     | 26        | 0     | 306     | Financial_count          | 15     | 28        | 0     | 186     |
|  | Financial_percent                | 0.04%  | 0.04%     | 0.00% | 0.46%   | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.23%   |
|  | Strategy_count                   | 11     | 10        | 0     | 114     | Strategy_count           | 9      | 13        | 0     | 91      |
|  | Strategy_percent                 | 0.02%  | 0.02%     | 0.00% | 0.18%   | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.11%   |
|  | Structure_count                  | 12     | 10        | 0     | 65      | Structure_count          | 11     | 12        | 0     | 64      |
|  | Structure_percent                | 0.03%  | 0.02%     | 0.00% | 0.14%   | Structure_percent        | 0.05%  | 0.03%     | 0.00% | 0.20%   |
|  | Corenvi_count                    | 23     | 20        | 0     | 140     | Corenvi_count            | 14     | 17        | 0     | 131     |
|  | Corenvi_percent                  | 0.05%  | 0.03%     | 0.00% | 0.18%   | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.20%   |
|  | Forwlookpositive_count           | 35     | 25        | 0     | 132     | Forwlookpositive_count   | 22     | 22        | 0     | 125     |
|  | Forwlookpositive_percent         | 0.10%  | 0.05%     | 0.00% | 0.28%   | Forwlookpositive_percent | 0.09%  | 0.06%     | 0.00% | 0.38%   |
|  | Forwlooknegative_count           | 19     | 32        | 0     | 296     | Forwlooknegative_count   | 10     | 10        | 0     | 71      |
|  | Forwlooknegative_percent         | 0.05%  | 0.05%     | 0.00% | 0.34%   | Forwlooknegative_percent | 0.05%  | 0.05%     | 0.00% | 0.29%   |
|  | Forwlook_tone                    | 0.37   | 0.33      | -1    | 1       | Forwlook_tone            | 0.30   | 0.36      | -0.7  | 1       |
|  | Reportsize                       | 34,151 | 24,823    | 4,878 | 212,533 | Reportsize               | 15,110 | 16,425    | 4,822 | 121,652 |
|  | Consumer discretionary (N=1,519) |        |           |       |         | Industrials (N=1563)     |        |           |       |         |
|  | Variable                         | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     |
|  | Forwlook_count                   | 51     | 33        | 3     | 245     | Forwlook_count           | 58     | 49        | 2     | 484     |
|  | Forwlook_percent                 | 5.82%  | 2.50%     | 0.82% | 15.54%  | Forwlook_percent         | 6.35%  | 2.52%     | 0.97% | 17.35%  |
|  | Financial_count                  | 10     | 11        | 0     | 164     | Financial_count          | 12     | 17        | 0     | 191     |
|  | Financial_percent                | 0.04%  | 0.04%     | 0.00% | 0.41%   | Financial_percent        | 0.05%  | 0.05%     | 0.00% | 0.78%   |
|  | Strategy_count                   | 5      | 6         | 0     | 65      | Strategy_count           | 6      | 9         | 0     | 84      |
|  | Strategy_percent                 | 0.02%  | 0.01%     | 0.00% | 0.12%   | Strategy_percent         | 0.02%  | 0.02%     | 0.00% | 0.28%   |
|  | Structure_count                  | 8      | 8         | 0     | 86      | Structure_count          | 9      | 11        | 0     | 103     |
|  | Structure_percent                | 0.04%  | 0.04%     | 0.00% | 0.27%   | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.28%   |
|  | Corenvi_count                    | 12     | 10        | 0     | 104     | Corenvi_count            | 13     | 13        | 0     | 110     |
|  | Corenvi_percent                  | 0.05%  | 0.04%     | 0.00% | 0.65%   | Corenvi_percent          | 0.06%  | 0.04%     | 0.00% | 0.47%   |
|  | Forwlookpositive_count           | 19     | 16        | 0     | 147     | Forwlookpositive_count   | 21     | 20        | 0     | 158     |
|  | Forwlookpositive_percent         | 0.11%  | 0.07%     | 0.00% | 0.83%   | Forwlookpositive_percent | 0.11%  | 0.07%     | 0.00% | 0.91%   |
|  | Forwlooknegative_count           | 10     | 9         | 0     | 94      | Forwlooknegative_count   | 12     | 14        | 0     | 151     |
|  | Forwlooknegative_percent         | 0.06%  | 0.05%     | 0.00% | 0.57%   | Forwlooknegative_percent | 0.07%  | 0.06%     | 0.00% | 0.63%   |
|  | Forwlook_tone                    | 0.29   | 0.35      | -1    | 1       | Forwlook_tone            | 0.25   | 0.36      | -1    | 1       |
|  | Reportsize                       | 16,161 | 11,492    | 624   | 73,344  | Reportsize               | 15,363 | 16,053    | 2,275 | 162,684 |
|  | Consumer staples (N=867)         |        |           |       |         | Materials (N=968)        |        |           |       |         |
|  | Variable                         | Mean   | Std. Dev. | Min   | Max     | Variable                 | Mean   | Std. Dev. | Min   | Max     |
|  | Forwlook_count                   | 58     | 35        | 5     | 240     | Forwlook_count           | 52     | 59        | 4     | 507     |
|  | Forwlook_percent                 | 5.42%  | 2.48%     | 0.70% | 14.52%  | Forwlook_percent         | 5.69%  | 2.53%     | 0.62% | 15.04%  |
|  | Financial_count                  | 10     | 10        | 0     | 114     | Financial_count          | 10     | 22        | 0     | 437     |
|  | Financial_percent                | 0.04%  | 0.04%     | 0.00% | 0.54%   | Financial_percent        | 0.04%  | 0.03%     | 0.00% | 0.22%   |
|  | Strategy_count                   | 6      | 7         | 0     | 63      | Strategy_count           | 6      | 13        | 0     | 250     |
|  | Strategy_percent                 | 0.02%  | 0.02%     | 0.00% | 0.12%   | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.08%   |
|  | Structure_count                  | 9      | 7         | 0     | 47      | Structure_count          | 8      | 11        | 0     | 128     |
|  | Structure_percent                | 0.04%  | 0.03%     | 0.00% | 0.29%   | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.16%   |
|  | Corenvi_count                    | 12     | 10        | 0     | 133     | Corenvi_count            | 12     | 15        | 0     | 163     |
|  | Corenvi_percent                  | 0.05%  | 0.03%     | 0.00% | 0.18%   | Corenvi_percent          | 0.05%  | 0.04%     | 0.00% | 0.27%   |
|  | Forwlookpositive_count           | 22     | 16        | 0     | 116     | Forwlookpositive_count   | 18     | 21        | 0     | 323     |
|  | Forwlookpositive_percent         | 0.11%  | 0.07%     | 0.00% | 0.54%   | Forwlookpositive_percent | 0.10%  | 0.07%     | 0.00% | 0.44%   |
|  | Forwlooknegative_count           | 11     | 9         | 0     | 92      | Forwlooknegative_count   | 11     | 12        | 0     | 173     |
|  | Forwlooknegative_percent         | 0.05%  | 0.04%     | 0.00% | 0.29%   | Forwlooknegative_percent | 0.06%  | 0.05%     | 0.00% | 0.51%   |
|  | Forwlook_tone                    | 0.35   | 0.34      | -1    | 1       | Forwlook_tone            | 0.22   | 0.39      | -1    | 1       |
|  | Reportsize                       | 19,321 | 12,622    | 5,139 | 73,232  | Reportsize               | 12,974 | 21,232    | 1,986 | 223,604 |

Table 5.4. Continued

|  | Energy (N=422)           |        |           |       |        | Technologies (N=562)     |        |           |       |        | Utilities (N=130)        |        |           |       |        |
|--|--------------------------|--------|-----------|-------|--------|--------------------------|--------|-----------|-------|--------|--------------------------|--------|-----------|-------|--------|
|  | Variable                 | Mean   | Std. Dev. | Min   | Max    | Variable                 | Mean   | Std. Dev. | Min   | Max    | Variable                 | Mean   | Std. Dev. | Min   | Max    |
|  | Forwlook_count           | 75     | 59        | 5     | 264    | Forwlook_count           | 40     | 23        | 5     | 171    | Forwlook_count           | 86     | 51        | 4     | 225    |
|  | Forwlook_percent         | 5.66%  | 2.35%     | 1.00% | 14.00% | Forwlook_percent         | 6.20%  | 2.31%     | 1.65% | 18.46% | Forwlook_percent         | 5.23%  | 1.71%     | 0.78% | 8.90%  |
|  | Financial_count          | 15     | 28        | 0     | 289    | Financial_count          | 7      | 7         | 0     | 125    | Financial_count          | 15     | 12        | 1     | 58     |
|  | Financial_percent        | 0.04%  | 0.04%     | 0.00% | 0.40%  | Financial_percent        | 0.05%  | 0.04%     | 0.00% | 0.33%  | Financial_percent        | 0.04%  | 0.02%     | 0.01% | 0.09%  |
|  | Strategy_count           | 11     | 15        | 0     | 89     | Strategy_count           | 4      | 5         | 0     | 44     | Strategy_count           | 12     | 12        | 0     | 54     |
|  | Strategy_percent         | 0.03%  | 0.02%     | 0.00% | 0.16%  | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.07%  | Strategy_percent         | 0.02%  | 0.01%     | 0.00% | 0.07%  |
|  | Structure_count          | 13     | 13        | 0     | 86     | Structure_count          | 6      | 5         | 0     | 36     | Structure_count          | 13     | 12        | 0     | 55     |
|  | Structure_percent        | 0.05%  | 0.04%     | 0.00% | 0.25%  | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.22%  | Structure_percent        | 0.04%  | 0.03%     | 0.00% | 0.16%  |
|  | Corenvi_count            | 19     | 21        | 0     | 120    | Corenvi_count            | 10     | 9         | 0     | 76     | Corenvi_count            | 16     | 13        | 1     | 59     |
|  | Corenvi_percent          | 0.05%  | 0.03%     | 0.00% | 0.19%  | Corenvi_percent          | 0.06%  | 0.04%     | 0.00% | 0.34%  | Corenvi_percent          | 0.04%  | 0.02%     | 0.01% | 0.09%  |
|  | Forwlookpositive_count   | 29     | 27        | 1     | 206    | Forwlookpositive_count   | 14     | 9         | 0     | 68     | Forwlookpositive_count   | 30     | 25        | 1     | 127    |
|  | Forwlookpositive_percent | 0.11%  | 0.06%     | 0.01% | 0.44%  | Forwlookpositive_percent | 0.11%  | 0.07%     | 0.00% | 0.54%  | Forwlookpositive_percent | 0.09%  | 0.06%     | 0.01% | 0.30%  |
|  | Forwlooknegative_count   | 17     | 18        | 0     | 147    | Forwlooknegative_count   | 8      | 7         | 0     | 85     | Forwlooknegative_count   | 17     | 12        | 0     | 53     |
|  | Forwlooknegative_percent | 0.07%  | 0.06%     | 0.00% | 0.54%  | Forwlooknegative_percent | 0.07%  | 0.07%     | 0.00% | 0.85%  | Forwlooknegative_percent | 0.05%  | 0.03%     | 0.00% | 0.19%  |
|  | Forwlook_tone            | 0.29   | 0.36      | -0.9  | 1      | Forwlook_tone            | 0.26   | 0.40      | -1    | 1      | Forwlook_tone            | 0.24   | 0.29      | -0.7  | 1      |
|  | Reportsize               | 18,738 | 19,251    | 2,661 | 86,121 | Reportsize               | 13,281 | 7,999     | 2,644 | 58,372 | Reportsize               | 33,810 | 19,536    | 3,696 | 96,361 |

Notes: *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Reportsize* is the natural logarithm of the total wordcount in the annual report.

## 5.2.2. Descriptive statistics of independent variables

### 5.2.2.1. Descriptive statistics of ownership variables

Table 5.5 shows that institutional investors hold by far the largest share of ASEAN firms with 30.18% on average. Foreign owners obtain an average of around 17% of share, followed by just above 11% of share held by managers. The average share held by the government is the lowest at 8.55%. However, the medians and standard deviations indicate that foreign, managerial and government shareholdings are not significant in many ASEAN firms compared to institutional shareholding. This is inconsistent with the statistics in OECD Equity Market Review - Asia 2018, discussed in Section 2.4, Chapter 2, which reports that government ownership dominates institutional ownership in ASEAN countries. A possible reason is that the governments in several ASEAN countries have indirect interests in listed companies through crossholdings so their ownership cannot be traced directly. Moreover, the countries with highest levels of government ownership in the region, Indonesia, and Vietnam, are weakly governed and less transparent than the other countries so information about government ownership may not be fully disclosed by firms. Table 5.5 further shows that there exists, but not many, firms wholly owned by foreign investors and the governments. These types of investors may target firms in specific industries or with specific characteristics such as large size or good performance.

**Table 5.5. Descriptive statistics of ownership variables**

| Variable        | Obs.  | Mean   | Median | Std. Dev. | Min   | Max    |
|-----------------|-------|--------|--------|-----------|-------|--------|
| Institution_own | 6,562 | 30.18% | 23.00% | 27.59%    | 0.00% | 92.27% |
| Foreign_own     | 6,562 | 16.72% | 5.06%  | 25.44%    | 0.00% | 100%   |
| Manager_own     | 6,562 | 11.63% | 2.29%  | 17.40%    | 0.00% | 87.80% |
| Government_own  | 6,562 | 8.55%  | 0.00%  | 21.37%    | 0.00% | 100%   |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively.

A similar ownership pattern is observed when ownership is viewed by country (Table 5.6). In all ASEAN countries, institutional ownership accounts for at least one third of total shares while foreign ownership is generally higher than managerial and government ownership. Listed firms in Singapore have the highest

proportion of foreign shares, with an average of 23.86%, followed by Indonesia (19.44%) and Vietnam (17.49%). These findings are in line with the statistics provided by World Federations of Exchanges in 2017 and De La Cruz et al. (2019) that Singapore and Indonesia have the highest level of foreign ownership in the region. Moreover, Singapore is the most popular ASEAN destination for cross-border M&As and foreign investment at both international and regional levels (UNCTAD, 2018; 2021). Meanwhile, among the ASEAN-4, Vietnam is the most attractive destination for China infrastructure investment through the equity mode. These results suggest that foreign investors are not only attracted by strong investor protection and good governance in ASEAN developed markets but also paying attention to emerging ASEAN economies. On average, managerial ownership ranges between 10-15% in ASEAN countries except the lowest figure in Indonesia with only 3.02%. Managerial ownership might be employed to strengthen the interest alignment between managers and shareholders in a majority of ASEAN firms. Meanwhile, government ownership is the least common ownership type in the region except a high level of 14.95% in Vietnam. This indicates the prevalence of government ownership in Vietnamese firms and the ongoing privatization of such firms during the study period.

**Table 5.6. Descriptive statistics of ownership variables by country**

| Country<br>(N) | Variable               | Mean            | Std. Dev. | Min    | Max    | Country<br>(N) | Variable       | Mean                   | Std. Dev.       | Min    | Max    |
|----------------|------------------------|-----------------|-----------|--------|--------|----------------|----------------|------------------------|-----------------|--------|--------|
|                | Indonesia<br>(N=1,069) | Institution_own | 35.48%    | 31.28% | 0.00%  |                | 92.27%         | Singapore<br>(N=1,706) | Institution_own | 28.40% | 27.99% |
|                | Foreign_own            | 19.44%          | 28.24%    | 0.00%  | 100%   |                | Foreign_own    | 23.46%                 | 32.66%          | 0.00%  | 100%   |
|                | Manager_own            | 3.02%           | 10.86%    | 0.00%  | 76.61% |                | Manager_own    | 16.25%                 | 20.41%          | 0.00%  | 87.80% |
|                | Government_own         | 8.73%           | 25.65%    | 0.00%  | 100%   |                | Government_own | 6.65%                  | 20.62%          | 0.00%  | 100%   |
| Country<br>(N) | Variable               | Mean            | Std. Dev. | Min    | Max    | Country<br>(N) | Variable       | Mean                   | Std. Dev.       | Min    | Max    |
|                | Malaysia<br>(N=2,149)  | Institution_own | 32.93%    | 27.34% | 0.00%  |                | 92.27%         | Thailand<br>(N=1,273)  | Institution_own | 23.51% | 23.02% |
|                | Foreign_own            | 12.64%          | 20.46%    | 0.00%  | 100%   |                | Foreign_own    | 12.53%                 | 17.98%          | 0.00%  | 94.47% |
|                | Manager_own            | 10.83%          | 15.99%    | 0.00%  | 72.92% |                | Manager_own    | 14.20%                 | 17.48%          | 0.00%  | 74.65% |
|                | Government_own         | 11.75%          | 21.08%    | 0.00%  | 97.29% |                | Government_own | 5.91%                  | 17.72%          | 0.00%  | 91.73% |
| Country<br>(N) | Variable               | Mean            | Std. Dev. | Min    | Max    | Country<br>(N) | Variable       | Mean                   | Std. Dev.       | Min    | Max    |
|                | Philippines<br>(N=189) | Institution_own | 31.19%    | 26.39% | 0.00%  |                | 86.94%         | Vietnam<br>(N=176)     | Institution_own | 28.89% | 23.15% |
|                | Foreign_own            | 14.43%          | 20.72%    | 0.00%  | 84.34% |                | Foreign_own    | 17.49%                 | 15.06%          | 0.00%  | 88.86% |
|                | Manager_own            | 8.80%           | 15.68%    | 0.00%  | 67.00% |                | Manager_own    | 13.29%                 | 15.06%          | 0.00%  | 56.74% |
|                | Government_own         | 0.33%           | 1.18%     | 0.00%  | 10.08% |                | Government_own | 14.95%                 | 30.15%          | 0.00%  | 99.99% |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively.

When ownership is viewed by year (Table 5.7), average institutional and foreign ownership significantly increase over the nine-year period while average managerial and government ownership remain unchanged. According to UNCTAD (2018), foreign investment in ASEAN countries grow rapidly from 2009 to 2016 as the result of investor confidence recovery after the financial crisis 2007/2008. This investment is made through three channels: cross-border M&As (mostly occurred in Singapore and Thailand), Chinese FDI infrastructure investment (mainly to the stock markets of Vietnam and Indonesia) and intra-regional investment from Singapore and Malaysia to other ASEAN countries (UNCTAD, 2018; UNCTAD, 2021). Likewise, this result indicates an upward trend in the investment made by foreign institutions in the region over the study period (UNCTAD, 2018). The insignificant change in managerial and government ownership may be because these two ownership types are more influenced by corporate governance practice and non-profit targets.

**Table 5.7. Descriptive statistics of ownership variables by year**

| Year                 | Variable        | Mean   | Std. Dev. | Min   | Max    | Year                 | Variable        | Mean   | Std. Dev. | Min   | Max    |
|----------------------|-----------------|--------|-----------|-------|--------|----------------------|-----------------|--------|-----------|-------|--------|
|                      |                 |        |           |       |        |                      |                 |        |           |       |        |
| Year 2009<br>(N=651) | Institution_own | 22.50% | 23.68%    | 0.00% | 92.27% | Year 2013<br>(N=749) | Institution_own | 35.10% | 28.37%    | 0.00% | 92.27% |
|                      | Foreign_own     | 14.09% | 22.68%    | 0.00% | 100%   |                      | Foreign_own     | 17.29% | 25.91%    | 0.00% | 100%   |
|                      | Manager_own     | 11.31% | 16.67%    | 0.00% | 74.59% |                      | Manager_own     | 11.24% | 17.21%    | 0.00% | 87.67% |
|                      | Government_own  | 8.45%  | 21.20%    | 0.00% | 99.99% |                      | Government_own  | 8.91%  | 22.15%    | 0.00% | 100%   |
| Year 2010<br>(N=683) | Institution_own | 19.34% | 23.75%    | 0.00% | 92.27% | Year 2014<br>(N=761) | Institution_own | 34.84% | 28.00%    | 0.00% | 92.27% |
|                      | Foreign_own     | 14.05% | 22.96%    | 0.00% | 100%   |                      | Foreign_own     | 17.54% | 25.91%    | 0.00% | 100%   |
|                      | Manager_own     | 12.28% | 17.90%    | 0.00% | 78.87% |                      | Manager_own     | 11.07% | 16.85%    | 0.00% | 87.67% |
|                      | Government_own  | 8.46%  | 21.21%    | 0.00% | 99.99% |                      | Government_own  | 8.21%  | 20.77%    | 0.00% | 99.99% |
| Year 2011<br>(N=703) | Institution_own | 23.59% | 26.78%    | 0.00% | 92.27% | Year 2015<br>(N=770) | Institution_own | 34.84% | 28.00%    | 0.00% | 92.27% |
|                      | Foreign_own     | 15.05% | 24.41%    | 0.00% | 100%   |                      | Foreign_own     | 17.54% | 25.91%    | 0.00% | 100%   |
|                      | Manager_own     | 12.65% | 18.65%    | 0.00% | 86.14% |                      | Manager_own     | 11.07% | 16.85%    | 0.00% | 87.67% |
|                      | Government_own  | 8.59%  | 21.54%    | 0.00% | 100%   |                      | Government_own  | 8.21%  | 20.77%    | 0.00% | 99.99% |
| Year 2012<br>(N=728) | Institution_own | 33.00% | 28.47%    | 0.00% | 92.27% | Year 2016<br>(N=765) | Institution_own | 33.48% | 27.50%    | 0.00% | 92.27% |
|                      | Foreign_own     | 16.34% | 25.87%    | 0.00% | 100%   |                      | Foreign_own     | 19.14% | 26.94%    | 0.00% | 100%   |
|                      | Manager_own     | 12.11% | 17.87%    | 0.00% | 74.59% |                      | Manager_own     | 11.02% | 16.66%    | 0.00% | 87.80% |
|                      | Government_own  | 8.71%  | 21.61%    | 0.00% | 99.99% |                      | Government_own  | 8.26%  | 20.87%    | 0.00% | 99.99% |
| Year 2017<br>(N=759) | Institution_own | 33.24% | 27.40%    | 0.00% | 92.27% | Year 2017<br>(N=759) | Institution_own | 33.24% | 27.40%    | 0.00% | 92.27% |
|                      | Foreign_own     | 19.11% | 26.80%    | 0.00% | 100%   |                      | Foreign_own     | 19.11% | 26.80%    | 0.00% | 100%   |
|                      | Manager_own     | 11.20% | 17.09%    | 0.00% | 87.80% |                      | Manager_own     | 11.20% | 17.09%    | 0.00% | 87.80% |
|                      | Government_own  | 8.61%  | 21.07%    | 0.00% | 99.99% |                      | Government_own  | 8.61%  | 21.07%    | 0.00% | 99.99% |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively.



Table 5.8 further shows descriptive statistics of ownership variables by industry. Institutional investors occupy by far the largest share in all industries. On average, the high institutional ownership is reported in Consumer staples, Communications, and Utilities sectors with above 35% while the lowest level is observed in Technologies sector with 20.31%. Foreign ownership ranks second in all industries. This ownership type is highest in Consumer staples and Energy industries with around 21% on average while being lowest in Industrials sector with 13%. Meanwhile, managerial ownership stays below 10% in Consumer staples, Energy, and Utilities sectors and ranges between 10-16% in other sectors. Compared to other ownership types, government ownership varies across industries to a larger extent. High government ownership focuses on Energy and Communications with 25.05% and 19.12% respectively while the government holds a minor share in other sectors, especially Consumer discretionary and Technologies with only below 5%. These statistics are in line with OECD (2014) that ASEAN governments only hold a significant share in specific sectors that provide essential services. Foreign investors show a stronger interest in services sector while institutional investors spread their investments to both services and manufacturing industries.

**Table 5.8. Descriptive statistics of ownership variables by industry**

|                                     | Variable        |           |        |       |        |                         | Variable        |        |        |       |        |
|-------------------------------------|-----------------|-----------|--------|-------|--------|-------------------------|-----------------|--------|--------|-------|--------|
|                                     | Mean            | Std. Dev. | Min    | Max   | Mean   |                         | Std. Dev.       | Min    | Max    |       |        |
| Communications<br>(N=327)           | Institution_own | 38.08%    | 28.45% | 0.00% | 92.27% | Healthcare<br>(N=211)   | Institution_own | 32.10% | 28.72% | 0.00% | 92.27% |
|                                     | Foreign_own     | 19.49%    | 21.91% | 0.00% | 87.73% |                         | Foreign_own     | 16.26% | 22.59% | 0.00% | 99.96% |
|                                     | Manager_own     | 10.22%    | 16.77% | 0.00% | 58.93% |                         | Manager_own     | 15.98% | 19.45% | 0.00% | 68.93% |
|                                     | Government_own  | 19.12%    | 30.11% | 0.00% | 93.20% |                         | Government_own  | 13.71% | 27.58% | 0.00% | 100%   |
|                                     |                 |           |        |       |        |                         |                 |        |        |       |        |
| Consumer discretionary<br>(N=1,512) | Institution_own | 30.05%    | 27.06% | 0.00% | 92.27% | Industrials<br>(N=1563) | Institution_own | 30.00% | 27.06% | 0.00% | 92.27% |
|                                     | Foreign_own     | 18.35%    | 27.76% | 0.00% | 100%   |                         | Foreign_own     | 13.00% | 20.49% | 0.00% | 100%   |
|                                     | Manager_own     | 11.89%    | 17.27% | 0.00% | 75.03% |                         | Manager_own     | 12.99% | 17.77% | 0.00% | 87.80% |
|                                     | Government_own  | 4.27%     | 13.54% | 0.00% | 93.82% |                         | Government_own  | 10.30% | 23.58% | 0.00% | 97.51% |
|                                     |                 |           |        |       |        |                         |                 |        |        |       |        |
| Consumer staples<br>(N=867)         | Institution_own | 35.50%    | 28.78% | 0.00% | 92.27% | Materials<br>(N=968)    | Institution_own | 25.08% | 26.30% | 0.00% | 92.27% |
|                                     | Foreign_own     | 21.68%    | 29.27% | 0.00% | 100%   |                         | Foreign_own     | 13.78% | 23.30% | 0.00% | 100%   |
|                                     | Manager_own     | 8.37%     | 15.26% | 0.00% | 67.00% |                         | Manager_own     | 10.89% | 17.39% | 0.00% | 73.93% |
|                                     | Government_own  | 6.27%     | 15.03% | 0.00% | 92.24% |                         | Government_own  | 5.29%  | 17.54% | 0.00% | 95.46% |
|                                     |                 |           |        |       |        |                         |                 |        |        |       |        |
| Energy<br>(N=422)                   | Institution_own | 35.70%    | 30.92% | 0.00% | 92.27% | Technologies<br>(N=562) | Institution_own | 20.31% | 22.37% | 0.00% | 92.27% |
|                                     | Foreign_own     | 20.63%    | 29.98% | 0.00% | 100%   |                         | Foreign_own     | 16.54% | 26.71% | 0.00% | 99.43% |
|                                     | Manager_own     | 7.17%     | 15.82% | 0.00% | 86.14% |                         | Manager_own     | 16.44% | 18.16% | 0.00% | 83.48% |
|                                     | Government_own  | 25.05%    | 36.14% | 0.00% | 100%   |                         | Government_own  | 2.70%  | 8.73%  | 0.00% | 58.73% |
|                                     |                 |           |        |       |        |                         |                 |        |        |       |        |
|                                     |                 |           |        |       |        | Utilities<br>(N=130)    | Institution_own | 38.19% | 26.59% | 0.00% | 83.14% |
|                                     |                 |           |        |       |        |                         | Foreign_own     | 13.15% | 19.64% | 0.00% | 89.94% |
|                                     |                 |           |        |       |        |                         | Manager_own     | 9.60%  | 19.44% | 0.00% | 63.87% |
|                                     |                 |           |        |       |        |                         | Government_own  | 13.73% | 25.48% | 0.00% | 82.16% |
|                                     |                 |           |        |       |        |                         |                 |        |        |       |        |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively.

### 5.2.2.2. Descriptive statistics of control variables

The descriptive statistics of control variables are presented in Table 5.9. The mean of firm size, as measured by a company's total assets scaled by the country's total, is 0.81 with a median of 0.14 and a standard deviation of 2.29. These figures indicate that ASEAN firms are largely varying in size and few companies are way larger than the majority. Financial performance of ASEAN firms is represented by the growth of sales revenue, 11.82% on average, and return on total assets, 5.19% on average. The medians of these two variables are 8.08% and 4.72% respectively and the standard deviations are 32.55% and 9.48%. These statistics show the variability in financial performance among ASEAN firms. Regarding financial leverage, ASEAN firms use more equity financing than debts with an average of 0.64 pound of debt to 1 pound of equity. These firms generally afford their short-term liabilities, as shown by both mean and median of current ratio above 1.

**Table 5.9. Descriptive statistics of control variables**

| Variable      | Obs.  | Mean   | Median | Std. Dev. | Min     | Max     |
|---------------|-------|--------|--------|-----------|---------|---------|
| Firmsize      | 6,570 | 0.81   | 0.14   | 2.29      | 0.0006  | 12.67   |
| Growth        | 5,450 | 11.82% | 8.08%  | 32.55%    | -58.05% | 189.75% |
| Leverage      | 6,436 | 0.64   | 0.41   | 0.84      | 0.00    | 5.56    |
| Liquidity     | 6,502 | 2.19   | 1.55   | 2.17      | 0.30    | 15.67   |
| Profitability | 6,286 | 5.19%  | 4.72%  | 9.48%     | -31.12% | 37.72%  |
| Auditor       | 6,570 | 1      | 1      | 0.47      | 0       | 1       |
| Boardsize     | 6,570 | 8      | 7      | 3         | 2       | 22      |
| Independence  | 6,194 | 42.42% | 42.86% | 14.90%    | 7.69%   | 100.00% |
| Reportsize    | 6,569 | 9.76   | 9.69   | 0.64      | 6.44    | 12.32   |

Notes: *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board.

Concerning corporate governance factors, a majority of ASEAN firms employ a Big4 firm as their external auditor. On average, the board of directors in these firms has 8 members and 42.42% of them are independent non-executive directors. Finally, the natural logarithm of the total word count in an annual report 9.76 on average with a median of 0.69 and a standard deviation of 0.64.

### 5.3. Bivariate analysis

Table 5.10 shows Pearson pairwise correlation coefficients between all forward-looking disclosure variables, measured by the count of sentences (or words), and the independent variables. Concerning ownership variables, high coefficients are reported between forward-looking disclosure variables and government ownership, ranging from 0.06 to 0.38; and institutional ownership, ranging from 0.09 to 0.27. Correlation between the dependent variables and managerial ownership is also highly significant but the magnitude of coefficients is smaller, ranging from -0.19 to 0.08. Coefficients for foreign ownership are less significant and much lower than the other three ownership types, ranging from 0.0001 to 0.06. The coefficients between four ownership variables and forward-looking themes and tone are all positive except those for managerial ownership. These results suggest that there exists a statistical association between forward-looking disclosure and ownership structure in ASEAN firms. Additionally, the correlation coefficients between control variables and forward-looking disclosure variables are all significant, except the sales growth rate. Among them, coefficients for the size of annual report are largest, ranging from 0.05 to 0.84.

**Table 5.10. Pearson correlation matrix between all independent variables and forward-looking disclosure variables as measured in absolute terms**

|                        | Forwlook<br>_count | Financial<br>_count | Strategy<br>_count | Structure<br>_count | Corenvi<br>_count | Forwlook<br>positive_<br>count | Forwlook<br>negative<br>_count | Forwlook<br>_tone |
|------------------------|--------------------|---------------------|--------------------|---------------------|-------------------|--------------------------------|--------------------------------|-------------------|
| Lagged Institution_own | 0.27**             | 0.15**              | 0.23**             | 0.22**              | 0.2**             | 0.24**                         | 0.14**                         | 0.09**            |
| Lagged Foreign_own     | 0.06**             | 0.02                | 0.02               | 0.05**              | 0.04**            | 0.05**                         | 0.04**                         | 0.0001            |
| Lagged Manager_own     | -0.18**            | -0.1**              | -0.19**            | -0.17**             | -0.17**           | -0.19**                        | -0.09**                        | 0.08**            |
| Lagged Government_own  | 0.38**             | 0.27**              | 0.32**             | 0.34**              | 0.31**            | 0.33**                         | 0.25**                         | 0.06**            |
| Firmsize               | 0.47**             | 0.3**               | 0.29**             | 0.39**              | 0.37**            | 0.42**                         | 0.31**                         | 0.08**            |
| Growth                 | -0.02              | -0.02               | 0.005              | 0.04**              | -0.01             | 0.004                          | -0.07**                        | 0.07**            |
| Leverage               | 0.1**              | 0.08**              | 0.06**             | 0.06**              | 0.09**            | 0.11**                         | 0.12**                         | -0.01             |
| Liquidity              | -0.09**            | -0.06**             | -0.09**            | -0.09**             | -0.11**           | -0.13**                        | -0.08**                        | -0.06**           |
| Profitability          | 0.1**              | 0.09**              | 0.13**             | 0.11**              | 0.08**            | 0.11**                         | -0.05**                        | 0.16**            |
| Boardsize              | 0.24**             | 0.19**              | 0.15**             | 0.13**              | 0.19**            | 0.19**                         | 0.19**                         | 0.02              |
| Auditor                | 0.18**             | 0.09**              | 0.09**             | 0.12**              | 0.16**            | 0.16**                         | 0.13**                         | 0.01              |
| Independence           | -0.04**            | -0.07**             | -0.18**            | -0.11**             | -0.05**           | -0.09**                        | 0.05**                         | -0.14             |
| Reportsize             | 0.84**             | 0.6**               | 0.68**             | 0.63**              | 0.69**            | 0.7**                          | 0.6**                          | 0.05**            |

Notes: *Forwlook\_count* is the count of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* denotes 1% significance level, \* denotes 5% significance level.

When forward-looking disclosure is measured in relative terms, the bivariate association between ownership structure and forward-looking disclosure is generally less significant (Table 5.11). Among the four ownership variables, institutional ownership and government ownership have a stronger correlation with forward-looking disclosure variables. At the 1% level, institutional ownership is correlated with the strategy topic (coefficient = 0.09); with the structure topic (coefficient = 0.06); with the positive tone (coefficient = 0.06); with the negative tone (coefficient = -0.08). Meanwhile, the coefficient between government ownership and the strategy topic is 0.15; and structure topic is 0.13; and corporate environment topic is 0.07; and the positive tone is 0.08; and the negative tone is -0.04. The control variables are more significantly correlated with the overall level of forward-looking disclosure, the strategy topic and the negative tone, compared to the other forward-looking disclosure variables.

**Table 5.11. Pearson correlation matrix between all independent variables and forward-looking disclosure variables as measured in relative terms**

|                        | Forwlook<br>_percent | Financial<br>_percent | Strategy<br>_percent | Structure<br>_percent | Corenvi<br>_percent | Forwlook<br>positive<br>_percent | Forwlook<br>negative<br>_percent |
|------------------------|----------------------|-----------------------|----------------------|-----------------------|---------------------|----------------------------------|----------------------------------|
| Lagged Institution_own | -0.01                | -0.02                 | 0.09**               | 0.06**                | 0.02                | 0.06**                           | -0.08**                          |
| Lagged Foreign_own     | -0.07**              | -0.02                 | -0.02                | 0.01                  | 0.01                | -0.005                           | -0.008                           |
| Lagged Manager_own     | 0.1**                | 0.06**                | -0.05**              | 0.01                  | 0.03*               | 0.01                             | 0.1**                            |
| Lagged Government_own  | 0.03*                | 0.01                  | 0.15**               | 0.13**                | 0.07**              | 0.08**                           | -0.04**                          |
| Firmsize               | -0.004               | 0.1**                 | 0.13**               | 0.14**                | 0.07**              | 0.08**                           | -0.04**                          |
| Growth                 | -0.01                | 0.02                  | 0.03*                | 0.06**                | 0.01                | 0.04**                           | -0.05**                          |
| Liquidity              | 0.06**               | 0.02                  | -0.04**              | 0.002                 | -0.01               | -0.02                            | 0.05**                           |
| Leverage               | -0.03*               | -0.01                 | 0.005                | -0.02                 | 0.01                | -0.01                            | 0.02                             |
| Profitability          | -0.1**               | 0.01                  | 0.08**               | 0.03*                 | -0.04**             | -0.006                           | -0.2**                           |
| Auditor                | 0.04**               | 0.01                  | 0.05**               | 0.07**                | 0.09**              | 0.1**                            | 0.01                             |
| Boardsize              | -0.03*               | -0.003                | 0.02                 | -0.01                 | 0.009               | -0.009                           | -0.07**                          |
| Independence           | 0.27**               | 0.06**                | -0.03**              | 0.05**                | 0.14**              | 0.12**                           | 0.2**                            |
| Reportsize             | -0.14**              | -0.07**               | 0.19**               | 0.01                  | 0.02                | -0.12**                          | -0.14**                          |

Notes: *Forwlook\_percent* is the percentage of forward-looking sentences in the annual report; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* denotes 1% significance level, \* denotes 5% significance level.

Table 5.12 shows Pearson pairwise correlation coefficients for all independent variables. Among ownership variables, institutional ownership is highly correlated with managerial ownership (coefficient = -0.39) and government ownership (coefficient = 0.41). Meanwhile, government ownership is highly correlated with firm size (coefficient = 0.36) and the annual report length (coefficient = 0.38). Concerning firm characteristics, the coefficients between firm size and other factors are high and significant, with those for board size, annual report size, and auditor firm are above 0.35. To sum up, the correlation matrix for all independent variables suggests that some pairs of independent variables are correlated but no coefficient is higher than 0.8.

**Table 5.12. Pearson correlation coefficients for all independent variables**

|                       | Lagged Institution_own | Lagged Foreign_own | Lagged Manager_own | Lagged Government_own | Firmsize | Growth  | Leverage | Liquidity | Profitability | Boardsize | Auditor | Independence |
|-----------------------|------------------------|--------------------|--------------------|-----------------------|----------|---------|----------|-----------|---------------|-----------|---------|--------------|
| Lagged Foreign_own    | 0.18**                 |                    |                    |                       |          |         |          |           |               |           |         |              |
| Lagged Manager_own    | -0.39**                | -0.24**            |                    |                       |          |         |          |           |               |           |         |              |
| Lagged Government_own | 0.41**                 | 0.01               | -0.21**            |                       |          |         |          |           |               |           |         |              |
| Firmsize              | 0.32**                 | 0.17**             | -0.26**            | 0.36**                |          |         |          |           |               |           |         |              |
| Growth                | -0.04**                | -0.002             | 0.02               | -0.02                 | -0.01    |         |          |           |               |           |         |              |
| Leverage              | 0.01                   | -0.03**            | 0.01               | -0.01                 | 0.21**   | 0.001   |          |           |               |           |         |              |
| Liquidity             | -0.02                  | 0.03               | 0.01               | -0.03*                | -0.17**  | -0.01   | -0.29**  |           |               |           |         |              |
| Profitability         | 0.08**                 | 0.06**             | -0.03*             | 0.09**                | 0.06**   | 0.16**  | -0.25    | 0.08      |               |           |         |              |
| Boardsize             | 0.08**                 | 0.04**             | -0.05**            | 0.14**                | 0.39**   | -0.01   | 0.07**   | -0.08**   | 0.11**        |           |         |              |
| Auditor               | 0.09**                 | 0.14**             | -0.13**            | 0.09**                | 0.35**   | -0.04** | -0.02    | -0.06**   | 0.12**        | 0.25**    |         |              |
| Independence          | 0.01                   | -0.05**            | 0.09**             | 0.17**                | -0.01    | -0.06** | -0.05**  | 0.03*     | -0.12**       | -0.04**   | 0.01    |              |
| Reportsize            | 0.23**                 | 0.04**             | -0.16**            | 0.38**                | 0.47**   | -0.02   | 0.11**   | -0.12**   | 0.13**        | 0.4**     | 0.18**  | -0.05**      |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* denotes 1% significance level, \* denotes 5% significance level.



To detect possible multicollinearity problems, Variance inflation factor (VIF) is obtained for all variables. The results in Table 5.13 show that the VIF ranges between 1.04 to 1.68, which is low and indicates that multicollinearity issues are not a major source of concern in this study as indicated in Treiman (2009, p.108) and Martin and Bridgmon (2012, p.414).

**Table 5.13. Variance inflation factor for all independent variables**

| Variable               | VIF  | 1/VIF |
|------------------------|------|-------|
| Independence           | 1.68 | 0.60  |
| Reportsize             | 1.65 | 0.61  |
| Boardsize              | 1.45 | 0.69  |
| Lagged Government_own  | 1.43 | 0.70  |
| Lagged Institution_own | 1.39 | 0.72  |
| Lagged Manager_own     | 1.34 | 0.75  |
| Firmsize               | 1.21 | 0.83  |
| Profitability          | 1.21 | 0.83  |
| Leverage               | 1.2  | 0.83  |
| Auditor                | 1.14 | 0.88  |
| Lagged Foreign_own     | 1.13 | 0.88  |
| Liquidity              | 1.12 | 0.89  |
| Growth                 | 1.04 | 0.96  |
| Mean VIF               | 1.31 |       |

Notes: *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board.

## **5.4. Multivariate analysis**

### **5.4.1. The impact of ownership structure on forward-looking disclosure**

#### **5.4.1.1. The impact of ownership structure on the overall level of forward-looking disclosure**

Table 5.14 reports that institutional, foreign and government ownership are the ownership identities that affect the overall level of forward-looking disclosure by ASEAN firms. There is no significant result for both linear and non-linear association between managerial ownership and forward-looking disclosure. The adjusted R-squared is 67.1% for the linear regression model and 66.7% for the non-linear regression model, showing good overall model fit. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

#### *Institutional ownership*

For institutional ownership, the non-linear results are significant at the 5% level (coefficient = 0.187,  $t = 2.27$ ). This provides evidence on the existence of a U-shaped relation between institutional ownership and forward-looking disclosure, meaning that forward-looking information is low when institutional ownership is at low levels and becomes more available when institutional owners gain more voting power. The direction of the relationship changes at a turning point of institutional ownership which equates the minimum level of forward-looking information. Meanwhile, the linear coefficient is not significant. This result suggests that institutional owners positively influence the management's propensity for disclosure with their expertise and experience when they obtain a sufficient shareholding. This result partly supports agency theory which predicts that institutional ownership strengthens the monitoring of management and hence reduces agency costs through increased disclosure (Dhaliwal et al., 1982; Rajgopal et al., 1999). It is also in line with stakeholder theory that institutional investors possess a high salient status which earns managers' urgent response to their information demand (Hu et al., 2017). Consequently, hypothesis 1c which

predicts a non-linear association between institutional ownership and forward-looking disclosure is supported but hypothesis 1a regarding a linear association is rejected.

The U-shaped association implies different investment strategies adopted by institutional shareholders in ASEAN firms. It is noteworthy that institutional ownership variable captures both short-term and long-term institutional investment in a company. While short-term institutional investors prioritize immediate returns over management control, such as trust funds in Malaysia (Saleh et al., 2010a, b), long-term institutional investors may apply a buy-and-hold strategy and have more incentives to influence the management over a long horizon. Low levels of institutional ownership can be attributed with the dominance of short-term investors while high ownership levels reflect greater involvement of long-term investors who pay more attention to corporate management, including disclosure policies. This finding is also in line with agency theory in its prediction of lower information asymmetry in closely held firms. This supports previous findings in emerging markets (Chen and Jaggi, 2000; Barako et al., 2006; Laidroo, 2009; Darmari and Sodikin, 2013; Nagata and Nguyen, 2017).

#### *Foreign ownership*

When it comes to foreign ownership, the result for the non-linear regression is highly significant at the 1% level while the linear coefficient is negative (coefficient = -0.065;  $t = -1.89$ ) and weakly significant at the 10% level. The non-linear coefficient of -0.357 ( $t = -2.99$ ) implies that foreign ownership has an inverted U-shaped relationship with forward-looking disclosure. As opposed to the impact of institutional ownership, forward-looking information is more available when foreign ownership is at low levels and decreases when the ownership becomes larger. There exists a turning point at which the impact changes its direction, or in other words, there is a level of foreign ownership at which forward-looking information reaches its maximum. This lends support to hypothesis 2c which predicts a non-linear impact of foreign ownership on forward-looking disclosure but rejects hypothesis 2a which predicts that the association is unidirectionally positive.

The strong inverted U-shaped association suggests that the impact of foreign shareholders on forward-looking disclosure is conditioned by the level of their ownership. It can be explained that foreign investors from different countries or regions have different investment strategies in the ASEAN. This positive impact may be associated with the presence of foreign investors originating from developed Western and Asian economies. A large amount of foreign portfolio investment in the ASEAN-6, with Singapore as the largest host country, comes from the US, the EU and some advanced Asian markets such as Japan and Korea (De La Cruz et al., 2019; UNCTAD, 2021). Investors from these countries are more familiar with international reporting standards and professional management so they have incentives to enhance corporate transparency. Moreover, they are more cautious with business regulations and principles in the host country compared to domestic investors; hence, they employ disclosure to obtain legitimacy. This result partly supports agency theory and legitimacy theory that foreign owners impose their informational expectations on investee firms to reduce the information asymmetry associated with offshore investments and potential non-compliance cost. The finding is consistent with previous studies in developing countries (Haniffa and Cooke, 2002; Barako et al., 2006; Wang et al., 2008; Al-Akra et al., 2010; Broberg et al., 2010; Liang et al., 2012; Khan et al., 2013; Liu, 2015; Huafang and Jianguo, 2017; Nagata and Nguyen, 2017).

However, the impact turns negative when foreign shareholdings exceed a certain level. This association is consistent with the weak negative association between foreign ownership and forward-looking disclosure. Collectively, these results imply the investment strategy adopted by foreign investors from emerging Asian markets or intra-regional investors who are likely to hold a large share in ASEAN listed firms. According to UNCTAD (2017; 2021), Singapore contributes the largest share of intra-regional investment and its top destinations are Indonesia and Malaysia. Meanwhile, Indonesia, Philippines and Thailand also actively invest in portfolio assets in their surrounding economies. These investors may seek short-term returns or take the advantage of tax incentives offered by the local governments while paying less attention to corporate management (UNCTAD, 2021). They are also less exposed to litigation costs due to being more familiar with local business

customs; hence, have less incentives for forward-looking disclosure. This result therefore partly supports proprietary cost theory that firms protect their competitive advantage by withholding information and the presence of large foreign owners in ASEAN firms provides firms with more incentives to do so.

#### *Government ownership*

Regarding government ownership, the linear association is highly significant and negative at the 5% level (coefficient = -0.167;  $t = -2.09$ ) while there is no indication of a non-linear association. This result is opposite to the expectation of a positive impact of government shareholdings, meaning that the presence of state owners discourages firms to disclose forward-looking information. Consequently, both hypotheses 4a regarding a positive association and 4c regarding a non-linear association are rejected. This result is inconsistent with previous findings that the government has incentives to employ its legitimacy power to promote corporate transparency (Ferguson et al., 2002; Laidroo, 2009; Ntim et al., 2012a; Khan et al., 2013; Ntim and Sobaroyen, 2013; Alhazaimah et al., 2014; Haddad et al., 2015; Kaur et al., 2016; Garde Sánchez et al., 2017; Hu et al., 2017) but consistent with Al-Janadi et al. (2016) which report that government ownership discourages the management to disclose forward-looking information.

The finding supports the notion that SOEs are associated with management inefficiency and poor transparency as found in prior studies in several ASEAN countries (Astami et al., 2010; Musallam, 2015; Musallam and Muniandy, 2017; Tu and Nguyen, 2021) and suggest that the non-profit objectives pursued by the government may deviate from the profit-maximizing goal pursued by other shareholders, leading to greater conflicts of interests. This finding is contrary to the prediction of stakeholder theory that, the government, as a powerful and legitimate stakeholder, imposes stricter requirements on firms to meet the information demand of the wider public, including different groups of other stakeholders (Khan et al., 2013; Hu et al., 2017). High corruption and low transparency in a majority of ASEAN countries, as discussed in Section 2.2.4 of Chapter 2, make government-owned firms less exposed to adverse legal actions against poor disclosure practice.

This result implies that the privatisation of SOEs in ASEAN countries is not effective in improving corporate transparency and accountability as initially planned by the governments. As a matter of fact, government ownership remains high in ASEAN countries, especially in the poorer nations such as Indonesia and Vietnam (OECD, 2018). In Indonesia, the process has led to a reduced number of SOEs but created much larger SOEs (Carney and Hamilton-Hard, 2015). This phenomenon has been explained as consolidation rather than divestment, leading to a larger value of assets held by the government. For ASEAN firms, privatisation can be interpreted as a government's mere response to pressure and criticism on their management inefficiency rather than making a real change in corporate disclosure practice.

#### *Managerial ownership*

The insignificant results for managerial ownership indicate that managerial shareholders do not play a role in deciding the public availability of forward-looking information. This shows the influencing power of other majority shareholders on the management's decision-making. Consequently, managers have limited chance to exploit their position on expropriating shareholders' wealth. On the other hand, their low ownership levels, as discussed in Section 5.2.1.1., may not be enough to align their interests with those of other shareholders. Hypotheses 3a and 3c are, therefore, rejected. This study does not support to agency theory, signalling theory and cost-based theories in linking managerial ownership to ASEAN firms' forward-looking disclosure levels.

Among control variables, only the size of annual report is positively associated with forward-looking disclosure at the 1% level (coefficient = 0.894 ~ 0.896;  $t = 34.9 \sim 35.27$ ). As a result, it is expected that the amount of forward-looking information is more available in long annual reports. Insignificant results for the remaining control variables suggest that forward-looking disclosure in ASEAN firms' annual reports is not explained by the selected firm characteristics and corporate governance factors in this study.

**Table 5.14. The impact of ownership structure on the count of forward-looking sentences in ASEAN firm's annual reports**

| Dependent variable: Forwlook_count<br>Independent variables | Hypothesis | Expected sign | Linear   |        | Non-linear |        |
|---|------------|---------------|----------|--------|------------|--------|
|   |            |               | Coeff.   | t-stat | Coeff.     | t-stat |
| Constant  |            |               | -4.993   | -20    | -4.993     | -20.21 |
| <b>Ownership</b>  |            |               |          |        |            |        |
| Lagged Institution_own                                      | 1a         | +             | 0.038    | 1.63   | -0.109     | -1.59  |
| Lagged Foreign_own  | 2a         | +             | -0.065*  | -1.89  | 0.244**    | 2.23   |
| Lagged Manager_own  | 3a         | -             | 0.113    | 1.51   | 0.108      | 0.64   |
| Lagged Government_own                                       | 4a         | +             | -0.167** | -2.09  | -0.422**   | -2.03  |
| <b>Squared ownership</b>                                    |            |               |          |        |            |        |
| Lagged Squared Institution_own                              | 1c         | ?             |          |        | 0.187**    | 2.27   |
| Lagged Squared Foreign_own                                  | 2c         | ?             |          |        | -0.357***  | -2.99  |
| Lagged Squared Manager_own                                  | 3c         | ?             |          |        | 0.009      | 0.04   |
| Lagged Squared Government_own                               | 4c         | ?             |          |        | 0.293      | 1.34   |
| <b>Company characteristics</b>                              |            |               |          |        |            |        |
| Firmsize  |            | +             | 0.003    | 0.23   | 0.002      | 0.13   |
| Growth  |            | +             | 0.018    | 1.39   | 0.019      | 1.4    |
| Liquidity   |            | +/-           | -0.003   | -0.89  | -0.002     | -0.81  |
| Leverage  |            | +             | 0.001    | 0.06   | 0.001      | 0.06   |
| Profitability   |            | +/-           | 0.029    | 0.44   | 0.032      | 0.48   |
| Reportsize  |            | +             | 0.894*** | 34.9   | 0.896***   | 35.27  |
| <b>Corporate governance factors</b>                         |            |               |          |        |            |        |
| Auditor   |            | +             | 0.008    | 0.31   | 0.007      | 0.25   |
| Boardsize   |            | +/-           | 0.005    | 0.98   | 0.004      | 0.73   |
| Independence  |            | +             | 0.068    | 0.91   | 0.056      | 0.77   |
| Adjusted R-squared  |            |               | 67.1%    |        | 66.7%      |        |
| Year and industry fixed effects                             |            |               | Yes      |        |            |        |
| Number of observations                                      |            |               | 5,006    |        |            |        |
| Number of firms   |            |               | 732      |        |            |        |

Notes: *Forwlook\_count* is the count of forward-looking sentences in the annual report; *Institution\_own*/*Foreign\_own*/*Manager\_own*/*Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

**Table 5.15. The impact of ownership structure on the percentage of forward-looking sentences in ASEAN firm's annual reports**

| Dependent variable:<br>Forwlook_percent | Hypothesis | Expected sign | Linear   |        | Non-linear |        |
|---|------------|---------------|----------|--------|------------|--------|
|   |            |               | Coeff.   | t-stat | Coeff.     | t-stat |
| Constant                                |            |               | 0.059    | 15.57  | 0.063      | 15.75  |
| <b>Ownership</b>                        |            |               |          |        |            |        |
| Lagged Institution_own                  | 1a         | +             | 0.0005   | 0.32   | -0.013***  | -2.8   |
| Lagged Foreign_own                      | 2a         | +             | -0.005** | -2.52  | 0.015**    | 2.4    |
| Lagged Manager_own                      | 3a         | -             | 0.004    | 1.02   | 0.002      | 0.2    |
| Lagged Government_own                   | 4a         | +             | -0.006   | -1.11  | -0.019     | -1.12  |
| <b>Squared ownership</b>                |            |               |          |        |            |        |
| Lagged Squared Institution_own          | 1c         | ?             |          |        | 0.017***   | 3.09   |
| Lagged Squared Foreign_own              | 2c         | ?             |          |        | -0.023***  | -3.28  |
| Lagged Squared Manager_own              | 3c         | ?             |          |        | 0.003      | 0.17   |
| Lagged Squared Government_own           | 4c         | ?             |          |        | 0.015      | 0.91   |
| <b>Company characteristics</b>          |            |               |          |        |            |        |
| Firmsize                                |            | +             | 0.0004   | 0.5    | 0.0003     | 0.43   |
| Growth                                  |            | +             | 0.0009   | 1.38   | 0.0009     | 1.38   |
| Liquidity                               |            | +/-           | -0.0002  | -0.92  | -0.0002    | -0.83  |
| Leverage                                |            | +             | -0.0001  | -0.33  | -0.0001    | -0.33  |
| Profitability                           |            | +/-           | -0.005   | -1.28  | -0.005     | -1.25  |
| <b>Corporate governance factors</b>     |            |               |          |        |            |        |
| Auditor                                 |            | +             | 0.002    | 1.21   | 0.002      | 1.12   |
| Boardsize                               |            | +/-           | -0.0001  | -0.45  | -0.0002    | -0.71  |
| Independence                            |            | +             | 0.002    | 0.5    | 0.002      | 0.39   |
| Adjusted R-squared                      |            |               | 1.22%    |        | 0.10%      |        |
| Year and industry fixed effects         |            |               | Yes      |        |            |        |
| Number of observations                  |            |               | 5,006    |        |            |        |
| Number of firms                         |            |               | 732      |        |            |        |

Notes: *Forwlook\_percent* is the percentage of forward-looking sentences in the annual report; *Institution\_own*/*Foreign\_own*/*Manager\_own*/*Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.



Table 5.15 reports multivariate regression results when forward-looking disclosure is measured as the percentage of forward-looking sentences in annual reports. The results for institutional, foreign, and managerial ownership are consistent with the findings discussed above. At the 1% level, institutional ownership has a U-shaped association with the relative amount of forward-looking information (coefficient = 0.017;  $t = 3.09$ ) while that of foreign ownership is an inverted U-shaped (coefficient = -0.023;  $t = -3.28$ ). There is no significant result for managerial ownership. These results provide additional evidence supporting hypotheses 1c and 2c.

However, the insignificant result for government ownership is inconsistent with the negative coefficient in Table 5.14, suggesting that firms with government ownership tend to avoid discussing future-related information while having no incentive to manage the relative amount of forward-looking information in their annual reports. This indicates that ASEAN firms with government ownership face less public information demand due to their pursuit of non-profit objectives (Musallam and Muniandy, 2017). In addition, these firms have less incentives to signal transparency as they are more reliant on the government's financial support, compared to firms without government ownership (Tu and Nguyen, 2021). Given the large government share in ASEAN listed companies, the management, which is partially appointed by the government, may have incentives to disguise their suboptimal behaviour by withholding forward-looking information. Statistics about weak legal enforcement in ASEAN countries in Section 2.2.4 of Chapter 2 support this claim.

#### **5.4.1.2. The impact of ownership structure on the themes of forward-looking disclosure**

The results for absolute disclosure measures (Table 5.16) are generally consistent with but more significant than the results for relative disclosure measures (Table 5.17). As the coefficients in Table 5.17 are too small, they are multiplied by 10,000 to make it easier for interpretation. It is shown that owners have different preferences on the themes of forward-looking disclosure. Forward-looking

information about financial performance, strategies and corporate environment are of interest among owners of ASEAN firms but not information about corporate structure. Among four ownership identities, foreign and institutional ownership are strongly associated with the three themes of forward-looking disclosure while the effect of government ownership is weaker. In addition, foreign ownership has a non-linear relationship with the topics related to corporate structure and corporate environment. It is consistent with the findings in Section 5.4.1.1 that managerial ownership has no significant effect on forward-looking disclosure.

Generally, institutional ownership has a linear effect on themes of forward-looking disclosure. Table 5.16 shows that this ownership type is negatively associated with financial forward-looking information at the 10% level (coefficient = -0.124;  $t = -1.88$ ), positively associated with strategy-related forward-looking information at the 5% level (coefficient = 0.121,  $t = 2.2$ ) and future information about corporate environment at the 1% level (coefficient = 0.182;  $t = 3.4$ ). Table 5.17 provides consistent results when the themes are measured by the proportions of words. These results imply that institutional shareholders strongly influence the content of forward-looking information. Their negative impact on financial information suggests that they may use other specialized financial reports such as earnings releases and conference calls rather than annual reports to evaluate financial performance. In annual reports, they mainly seek non-financial information such as future strategies and expected environmental changes which might be missed or limitedly discussed in earnings reports. These results provide further support to the agency theory and stakeholder theory as discussed in Section 5.4.1.1.

When it comes to foreign ownership, there are significant results for both linear and non-linear models. Table 5.16 shows that foreign ownership is negatively associated with financial information at the 1% level (coefficient = -0.249;  $t = -2.89$ ), negatively associated with corporate environment information at the 10% level (coefficient = -0.144,  $t = -1.9$ ) and positively associated with strategic information at the 10% level (coefficient = 0.191,  $t = 1.95$ ). Additionally, there is an inverted U-shaped association between foreign ownership and structural information (coefficient = -0.656;  $t = -2.35$ ) and information about business environment at the

5% level (coefficient = -0.572;  $t = -2.25$ ). These mixed results reveal that foreign-owned firms are influenced by the cost-benefit trade-off when disclosing forward-looking information. They tend to disclose information when they perceive benefits exceed associated costs and vice versa.

Furthermore, foreign investors in ASEAN firms may employ different types of communications rather than solely relying on annual reports and their disclosure practice is more in line with international standards. Compared to domestic counterparts, firms with foreign ownership invest more in market research to understand the host country's business environment so they are less reliant on annual reports for this information. Likewise, financial information might be discussed in other specialised financial reports by foreign-owned firms than in annual reports. Meanwhile, high proprietary costs associated with structural information discourage these firms from dispensing this information. Among the four themes, the only positive effect of foreign ownership is on future strategic information, suggesting that future strategies might be purposely chosen by foreign-owned firms to inform the public on an annual basis. Collectively, the results indicate that the effect of foreign ownership on the themes of forward-looking disclosure is more inclined to a negative direction.

On the other hand, Table 5.16 shows that a weak negative association exists between government ownership and financial forward-looking information (coefficient = -0.362;  $t = -1.72$ ); and structural forward-looking information (coefficient = -0.321;  $t = -1.83$ ) at the 10% level. There is no significant result for government ownership in the non-linear regression. This means that firms have incentives to withhold forward-looking information about financial performance and structure when government ownership increases. These results are in line with the finding in Section 5.4.1.1 that the participation of ASEAN governments in corporate ownership deteriorates corporate transparency. Firms with government ownership face lower public information demand or high proprietary costs due to their political nature.

Among control variables, sales growth, profitability, and the size of annual report are significantly and positively associated with the forward-looking themes of

corporate structure and environment. A strong positive association at the 5% level indicates that growing firms have more incentives to update investors on future changes in business structure and external environment to support their expansion plans. Profitable firms, on the other hand, discuss more about corporate structure in their forward-looking statements although the association is weak at the 10% level. In line with the findings in Section 5.4.1.1, the length of annual report is positively associated with all themes, confirming that forward-looking information increases with the size of annual report. Board independence is found to negatively influence structure-related information. This result is inconsistent with previous findings (Barako et al., 2006; Cheng and Courtenay, 2006; Abraham and Cox, 2007; Donnelly and Mulcahy, 2008; Oliveira et al., 2011; Al-Najjar and Hussainey, 2011; Ntim et al., 2013; Wang and Hussainey, 2013; Allini et al., 2016; Saggar and Singh, 2017; Elgammal et al., 2018), suggesting that independent directors play a minor role in promoting transparency in ASEAN firms.

**Table 5.16. The impact of ownership structure on themes of forward-looking disclosure as measured by the count of words**

| Dependent variable                  | Financial_count       |       |          |        | Strategy_count |        |          |        | Structure_count |        |          |        | Corenvi_count |        |          |        |
|-------------------------------------|-----------------------|-------|----------|--------|----------------|--------|----------|--------|-----------------|--------|----------|--------|---------------|--------|----------|--------|
|                                     | Independent variables |       | Coeff.   | t-stat | Coeff.         | t-stat | Coeff.   | t-stat | Coeff.          | t-stat | Coeff.   | t-stat | Coeff.        | t-stat | Coeff.   | t-stat |
| Constant                            | -5.872                | -9.73 | -5.92    | -9.79  | -7.988         | -14.64 | -7.961   | -14.55 | -5.688          | -11.82 | -5.67    | -11.85 | -7.78         | -15.11 | -7.8     | -15.18 |
| <b>Ownership</b>                    |                       |       |          |        |                |        |          |        |                 |        |          |        |               |        |          |        |
| Lagged Institution_own              | -0.124*               | -1.88 | -0.345** | -1.99  | 0.121**        | 2.2    | 0.124    | 0.76   | 0.027           | 0.45   | -0.077   | -0.42  | 0.182***      | 3.4    | -0.0004  | 0      |
| Lagged Foreign_own                  | -0.249***             | -2.89 | -0.029   | -0.09  | 0.191*         | 1.95   | 0.181    | 0.63   | -0.126          | -1.4   | 0.443    | 1.59   | -0.144*       | -1.9   | 0.356    | 1.44   |
| Lagged Manager_own                  | -0.031                | -0.22 | -0.171   | -0.43  | -0.007         | -0.05  | -0.291   | -0.82  | 0.108           | 0.8    | 0.297    | 0.8    | 0.128         | 0.93   | 0.311    | 0.95   |
| Lagged Government_own               | -0.362*               | -1.72 | 0.008    | 0.01   | 0.054          | 0.36   | -0.395   | -0.7   | -0.321*         | -1.83  | -0.544   | -1     | -0.227        | -1.45  | -0.02    | -0.04  |
| <b>Squared ownership</b>            |                       |       |          |        |                |        |          |        |                 |        |          |        |               |        |          |        |
| Lagged squared Institution_own      |                       |       | 0.284    | 1.41   |                |        | 0.003    | 0.01   |                 |        | 0.118    | 0.53   |               |        | 0.222    | 1.12   |
| Lagged squared Foreign_own          |                       |       | -0.26    | -0.73  |                |        | 0.008    | 0.03   |                 |        | -0.656** | -2.35  |               |        | -0.572** | -2.25  |
| Lagged squared Manager_own          |                       |       | 0.236    | 0.38   |                |        | 0.488    | 0.87   |                 |        | -0.319   | -0.59  |               |        | -0.314   | -0.58  |
| Lagged squared Government_own       |                       |       | -0.416   | -0.73  |                |        | 0.505    | 0.93   |                 |        | 0.269    | 0.52   |               |        | -0.221   | -0.49  |
| <b>Company characteristics</b>      |                       |       |          |        |                |        |          |        |                 |        |          |        |               |        |          |        |
| Firmsize                            | -0.009                | -0.33 | -0.009   | -0.35  | -0.011         | -0.33  | -0.012   | -0.34  | 0.009           | 0.4    | 0.005    | 0.23   | -0.019        | -0.85  | -0.022   | -0.96  |
| Growth                              | -0.008                | -0.27 | -0.009   | -0.29  | 0.007          | 0.25   | 0.008    | 0.27   | 0.069***        | 2.61   | 0.069*** | 2.62   | 0.073***      | 2.89   | 0.073*** | 2.89   |
| Liquidity                           | 0.001                 | 0.07  | 0.0009   | 0.11   | 0.011          | 1.5    | 0.011    | 1.5    | 0.005           | 0.59   | 0.005    | 0.58   | -0.008        | -0.64  | -0.008   | -0.62  |
| Leverage                            | -0.014                | -0.67 | -0.013   | -0.67  | 0.008          | 0.39   | 0.007    | 0.38   | -0.013          | -0.64  | -0.012   | -0.6   | 0.006         | 0.33   | 0.007    | 0.35   |
| Profitability                       | 0.109                 | 0.67  | 0.115    | 0.7    | -0.085         | -0.59  | -0.087   | -0.6   | 0.288*          | 1.78   | 0.294*   | 1.82   | 0.02          | 0.14   | 0.027    | 0.18   |
| Reportsize                          | 0.813***              | 13.21 | 0.818*** | 13.3   | 0.939***       | 17.09  | 0.939*** | 17.08  | 0.766***        | 15.1   | 0.764*** | 15.08  | 1.012***      | 19.43  | 1.015*** | 19.47  |
| <b>Corporate governance factors</b> |                       |       |          |        |                |        |          |        |                 |        |          |        |               |        |          |        |
| Auditor                             | -0.032                | -0.44 | -0.033   | -0.46  | 0.019          | 0.27   | 0.019    | 0.27   | 0.054           | 0.86   | 0.053    | 0.85   | 0.047         | 0.64   | 0.046    | 0.62   |
| Boardsize                           | -0.007                | -0.62 | -0.008   | -0.67  | 0.001          | 0.06   | 0.001    | 0.09   | 0.004           | 0.31   | 0.001    | 0.12   | -0.009        | -0.94  | -0.012   | -1.16  |
| Independence                        | 0.193                 | 1.22  | 0.194    | 1.22   | 0.175          | 1.06   | 0.169    | 1.03   | -0.285*         | -1.64  | -0.307*  | -1.77  | 0.23          | 1.53   | 0.217    | 1.43   |
| Adjusted R-squared                  | 30.17%                |       | 30.65%   |        | 42.50%         |        | 42.69%   |        | 34.04%          |        | 33.70%   |        | 46.45%        |        | 46.50%   |        |
| Year and industry fixed effects     | Yes                   |       |          |        |                |        |          |        |                 |        |          |        |               |        |          |        |
| Number of observations              | 4,856                 |       |          |        | 4,629          |        |          |        | 4,753           |        |          |        | 4,930         |        |          |        |
| Number of firms                     | 731                   |       |          |        | 727            |        |          |        | 738             |        |          |        | 731           |        |          |        |

Notes: *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

While most results in Table 5.17 are consistent with those reported in Table 5.16, there are some differences. Firstly, while government ownership has a negative association with the topics of financial performance and corporate structure as discussed above, its U-shaped association with the strategic topic in Table 5.17 (coefficient = 2.862,  $t = 1.95$  at the 10% level) suggests that the government-owned ASEAN firms disclose more strategy-related information in forward-looking statements when its shareholding exceeds a threshold, and, they consider the relative amount of this information in the whole annual report. This result can be attributed to the on-going privatisation of SOEs in several ASEAN countries, which involves with different stages of restructuring business activities. Firms with high government ownership therefore has more information about future planning and policy changes to discuss in their annual reports.

Secondly, there is a U-shaped relationship between institutional ownership and the corporate environment theme at the 5% level (coefficient = 2.094,  $t = 2.04$ ), which is not observed for the absolute disclosure measure. On the contrary to the positive coefficient in Table 5.16, this result provides empirical evidence on different investment strategies adopted by institutional investors in ASEAN countries when considering the relative focus of the topic in annual reports. As discussed in Section 5.4.1.1, institutional investors with a short-term investment horizon tends to pay less attention to disclosure while those with a long-term investment horizon have the incentive to promote a rich informational environment, leading to conflicting effects on the extent of future-related environmental information.

Thirdly, managerial ownership is positively associated with the level of forward-looking environmental information at the 10% level (coefficient = 1.649,  $t = 1.93$ ). While managerial ownership is generally insignificantly associated with the overall level of forward-looking disclosure and other themes, this result provides evidence that managerial ownership induces ASEAN firms to discuss more about future changes in the business environment. The low proprietary cost associated with this type of information may motivate managers to increase disclosure to enhance share prices.

**Table 5.17. The impact of ownership structure on themes of forward-looking disclosure as measured by the percentage of words**

| Dependent variable                  | Financial_percent |        |          |        | Strategy_percent |        |        |        | Structure_percent |        |          |        | Corenvi_percent |        |          |        |
|-------------------------------------|-------------------|--------|----------|--------|------------------|--------|--------|--------|-------------------|--------|----------|--------|-----------------|--------|----------|--------|
| Independent variables               | Coeff.            | t-stat | Coeff.   | t-stat | Coeff.           | t-stat | Coeff. | t-stat | Coeff.            | t-stat | Coeff.   | t-stat | Coeff.          | t-stat | Coeff.   | t-stat |
| Constant                            | 5.343             | 8.51   | 5.391    | 8.29   | 1.409            | 3.61   | 1.520  | 3.87   | 4.231             | 5.96   | 4.317    | 3.87   | 4.965           | 6.76   | 4.931    | 6.52   |
| <b>Ownership</b>                    |                   |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Lagged Institution_own              | -0.655**          | -2.21  | -1.951** | -2.09  | 0.386***         | 3.31   | 0.230  | 0.65   | -0.182            | -0.62  | -0.977   | -1.08  | 0.524*          | 1.74   | -1.145   | -1.38  |
| Lagged Foreign_own                  | -1.095**          | -2.02  | -0.583   | -0.4   | 0.199            | 1.31   | 0.381  | 0.72   | -0.515            | -1.51  | 1.963*   | 1.82   | -0.579          | -1.56  | 2.354*   | 1.78   |
| Lagged Manager_own                  | -0.059            | -0.08  | -1.277   | -0.56  | 0.052            | 0.2    | -0.351 | -0.45  | 0.600             | 0.9    | 0.579    | 0.31   | 1.649*          | 1.93   | 3.353    | 1.47   |
| Lagged Government_own               | -1.066*           | -1.76  | 1.482    | 0.73   | 0.365            | 0.83   | -2.167 | -1.48  | -0.804            | -0.93  | -2.146   | -0.73  | -0.798          | -0.78  | 1.770    | 0.72   |
| <b>Squared ownership</b>            |                   |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Lagged squared Institution_own      |                   |        | 1.715    | 1.54   |                  |        | 0.220  | 0.48   |                   |        | 0.983    | 1.17   |                 |        | 2.094**  | 2.04   |
| Lagged squared Foreign_own          |                   |        | -0.621   | -0.45  |                  |        | -0.222 | -0.38  |                   |        | -2.854** | -2.49  |                 |        | -3.364** | -2.52  |
| Lagged squared Manager_own          |                   |        | 2.071    | 0.57   |                  |        | 0.701  | 0.57   |                   |        | 0.050    | 0.02   |                 |        | -2.931   | -0.85  |
| Lagged squared Government_own       |                   |        | -2.934   | -1.42  |                  |        | 2.862* | 1.95   |                   |        | 1.582    | 0.56   |                 |        | -2.862   | -1.1   |
| <b>Company characteristics</b>      |                   |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Firmsize                            | 0.093             | 0.68   | 0.097    | 0.72   | 0.112            | 0.59   | 0.111  | 0.58   | 0.053             | 0.36   | 0.037    | 0.27   | -0.007          | -0.07  | -0.019   | -0.18  |
| Growth                              | -0.012            | -0.08  | -0.019   | -0.12  | 0.048            | 0.75   | 0.049  | 0.78   | 0.333**           | 2.31   | 0.335**  | 2.32   | 0.374***        | 2.82   | 0.371*** | 2.8    |
| Liquidity                           | -0.009            | -0.27  | -0.008   | -0.22  | 0.010            | 0.46   | 0.011  | 0.47   | 0.026             | 0.83   | 0.027    | 0.89   | -0.005          | -0.11  | -0.003   | -0.07  |
| Leverage                            | -0.038            | -0.42  | -0.038   | -0.42  | 0.017            | 0.45   | 0.015  | 0.41   | -0.012            | -0.15  | -0.011   | -0.14  | 0.045           | 0.47   | 0.047    | 0.49   |
| Profitability                       | 1.038             | 1.33   | 1.059    | 1.37   | -0.446           | -1.37  | -0.452 | -1.40  | 0.804             | 1.25   | 0.826    | 1.28   | -0.152          | -0.17  | -0.122   | -0.13  |
| <b>Corporate governance factors</b> |                   |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Auditor                             | -0.035            | -0.08  | -0.048   | -0.12  | 0.039            | 0.2    | 0.035  | 0.18   | 0.274             | 1.01   | 0.270    | 1      | 0.318           | 0.83   | 0.302    | 0.78   |
| Boardsize                           | -0.062            | -1.39  | -0.062   | -1.4   | 0.012            | 0.38   | 0.011  | 0.36   | 0.002             | 0.03   | -0.008   | -0.12  | -0.065          | -1.12  | -0.078   | -1.36  |
| Independence                        | -0.144            | -0.19  | -0.101   | -0.13  | 0.483            | 1.43   | 0.451  | 1.34   | -0.775            | -1.04  | -0.863   | -1.16  | 1.119           | 1.2    | 1.087    | 1.17   |
| Adjusted R-squared                  | 1.60%             |        | 0.21%    |        | 1.60%            |        | 1.09%  |        | 0.10%             |        | 0.30%    |        | 0.50%           |        | 0.67%    |        |
| Year and industry fixed effects     | Yes               |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Number of observations              | 5,006             |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |
| Number of firms                     | 732               |        |          |        |                  |        |        |        |                   |        |          |        |                 |        |          |        |

Notes: *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

### **5.4.1.3. The impact of ownership structure on the tone of forward-looking disclosure**

Table 5.18 presents regression results when the tone of disclosure is measured by the count of words while Table 5.19 shows results when the tone is measured by the percentage of words. As the coefficients in Table 5.19 are too small, they are multiplied by 10,000 to make it easier for interpretation. The results are consistent that institutional ownership has a strong U-shaped impact on the positive tone of forward-looking information at the 1% level (coefficient = 0.421,  $t = 2.47$  in Table 5.18 coefficient = 6.583,  $t = 2.82$  in Table 5.19) while the impact of managerial ownership is positive and weak at the 10% level (coefficient = 0.212,  $t = 1.75$  in Table 5.18; coefficient = 3.036,  $t = 1.98$  in Table 5.19). Moreover, a U-shaped relationship between government ownership and the count of negative words at the 5% level is reported in Table 5.18 (coefficient = 1.122,  $t = 2.41$ ). This association does not exist when the tone is measured by the word percentage. There is also evidence that foreign ownership has a non-linear impact on the positive tone, but the association is weak at the 10% level (coefficient = -0.452,  $t = -1.99$  in Table 5.18). The results for the aggregate tone of forward-looking disclosure are generally insignificant except a weak positive impact of managerial ownership at the 10% level (coefficient = 0.125,  $t = 1.81$ ). Collectively, the results strongly support the dominant non-linear effect of institutional ownership on forward-looking disclosure among ASEAN firms as discussed in Section 5.4.1.1 and 5.4.1.2 and consequently further support hypothesis 1c.

The results for managerial ownership suggest that managers are more likely to inflate the tone of forward-looking disclosures when their shareholdings increase. In addition, managers also perceive that users consider the balance between good and bad news when inferring their messages in forward-looking disclosure. The positive association between managerial ownership and the net tone of forward-looking disclosure supports this argument because an increase in the net tone implies that positive news outweighs negative news in forward-looking statements. The preference of positive news reveals managers' incentives to impress other shareholders by increasing the optimistic sentiment in their future expectations.



Subsequently, they influence market expectations on their company performance and benefit from favourable stock price changes. These results support previous findings in Allee and Deangelis (2015) and Arslan-Ayaydin et al. (2016).

Regarding control variables, firm size, sales growth, and profitability are the firm characteristics that affect the tone of forward-looking disclosure. While both good and bad news are disclosed more by large firms, the association between the net tone and firm size is not significant. This indicates that large firms have the incentive to disclose more positive and negative forward-looking information but do not pay attention to the aggregate tone of forward-looking disclosure. It is, otherwise, interesting that growing firms prefer to discuss good news and avoid bad news in their forward-looking statements. A strong negative association at the 1% level indicates that growing firms are sensitive to bad news which may affect their ability to attract capital investment for expansion.

The size of annual report, on the other hand, is highly significantly associated with the number of positive and negative words at the 1% level. Among corporate governance factors, only board size is significantly associated with the negative tone of forward-looking disclosure but the association is weak at the 10% level. The negative sign implies that a large board reduces the amount of bad news in forward-looking statements.

**Table 5.18. The impact of ownership structure on the tone of forward-looking disclosure as measured by the count of words**

| Dependent variable                  | Forwlookpositive_count |  |          |        | Forwlooknegative_count |        |           |        | Forwlook_tone |        |          |        |          |       |
|-------------------------------------|------------------------|--|----------|--------|------------------------|--------|-----------|--------|---------------|--------|----------|--------|----------|-------|
|                                     | Independent variables  |  | Coeff.   | t-stat | Coeff.                 | t-stat | Coeff.    | t-stat | Coeff.        | t-stat | Coeff.   | t-stat |          |       |
| Constant                            |                        |  | -5.836   | -12.93 | -5.873                 | -13.08 | -6.415    | -13.45 | -6.351        | -13.34 | 0.251    | 4.13   | 0.247    | 4.05  |
| <b>Ownership</b>                    |                        |  |          |        |                        |        |           |        |               |        |          |        |          |       |
| Lagged Institution_own              |                        |  | 0.093*   | 1.97   | -0.234                 | -1.67  | 0.009     | 0.15   | -0.025        | -0.15  | 0.022    | 0.71   | -0.099   | -1.08 |
| Lagged Foreign_own                  |                        |  | -0.042   | -0.56  | 0.345                  | 1.63   | 0.057     | 0.52   | 0.376         | 1.22   | -0.039   | -0.67  | 0.029    | 0.2   |
| Lagged Manager_own                  |                        |  | 0.212*   | 1.75   | 0.081                  | 0.25   | -0.052    | -0.48  | -0.469        | -1.42  | 0.125*   | 1.81   | 0.243    | 1.31  |
| Lagged Government_own               |                        |  | -0.143   | -1.25  | -0.220                 | -0.6   | -0.273    | -1.64  | -1.256**      | -2.56  | 0.061    | 0.8    | 0.35     | 1.53  |
| <b>Squared ownership</b>            |                        |  |          |        |                        |        |           |        |               |        |          |        |          |       |
| Lagged squared Institution_own      |                        |  |          |        | 0.421**                | 2.47   |           |        | 0.045         | 0.22   |          |        | 0.156    | 1.37  |
| Lagged squared Foreign_own          |                        |  |          |        | -0.452*                | -1.99  |           |        | -0.373        | -1.09  |          |        | -0.078   | -0.48 |
| Lagged squared Manager_own          |                        |  |          |        | 0.225                  | 0.54   |           |        | 0.724         | 1.54   |          |        | -0.205   | -0.81 |
| Lagged squared Government_own       |                        |  |          |        | 0.087                  | 0.25   |           |        | 1.122**       | 2.41   |          |        | -0.33    | -1.52 |
| <b>Company characteristics</b>      |                        |  |          |        |                        |        |           |        |               |        |          |        |          |       |
| Firmsize                            |                        |  | 0.009    | 0.5    | 0.008                  | 0.46   | 0.037     | 1.35   | 0.034         | 1.23   | -0.012   | -0.96  | -0.011   | -0.92 |
| Growth                              |                        |  | 0.049**  | 2.23   | 0.049**                | 2.22   | -0.071*** | -2.86  | -0.070        | -2.85  | 0.051*** | 3.59   | 0.051*** | 3.57  |
| Liquidity                           |                        |  | -0.002   | -0.35  | -0.002                 | -0.28  | -0.002    | -0.3   | -0.002        | -0.27  | 0.0003   | 0.09   | 0.0005   | 0.12  |
| Leverage                            |                        |  | 0.001    | 0.08   | 0.001                  | 0.07   | 0.026     | 1.64   | 0.026         | 1.63   | -0.009   | -1.08  | -0.009   | -1.08 |
| Profitability                       |                        |  | 0.026    | 0.2    | 0.032                  | 0.25   | -0.317**  | -1.97  | -0.315        | -1.96  | 0.214**  | 2.14   | 0.215**  | 2.16  |
| Reportsize                          |                        |  | 0.877*** | 18.29  | 0.884***               | 18.53  | 0.886***  | 18.43  | 0.884***      | 18.38  |          |        |          |       |
| <b>Corporate governance factors</b> |                        |  |          |        |                        |        |           |        |               |        |          |        |          |       |
| Auditor                             |                        |  | 0.040    | 0.88   | 0.037                  | 0.82   | 0.086     | 1.6    | 0.086         | 1.59   | -0.024   | -0.75  | -0.026   | -0.8  |
| Boardsize                           |                        |  | -0.004   | -0.55  | -0.006                 | -0.74  | -0.017    | -1.62  | -0.017*       | -1.71  | 0.005    | 1      | 0.005    | 0.92  |
| Independence                        |                        |  | 0.041    | 0.36   | 0.031                  | 0.27   | 0.092     | 0.63   | 0.069         | 0.48   | -0.049   | -0.66  | -0.044   | -0.61 |
| Adjusted R-squared                  |                        |  | 50.42%   |        | 50.69%                 |        | 35.47%    |        | 35.13%        |        | 0.75%    |        | 1.11%    |       |
| Year and industry fixed effects     |                        |  | Yes      |        |                        |        |           |        |               |        |          |        |          |       |
| Number of observations              |                        |  | 5,006    |        |                        |        | 5,006     |        |               |        | 5,004    |        |          |       |
| Number of firms                     |                        |  | 732      |        |                        |        | 732       |        |               |        | 732      |        |          |       |

Notes: *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences respectively; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

**Table 5.19. The impact of ownership structure on the tone of forward-looking disclosure as measured by the percentage of words**

| Dependent variable                  | Forlookpositive_percent |       |          |        | Forlooknegative_percent |        |          |        |        |        |
|-------------------------------------|-------------------------|-------|----------|--------|-------------------------|--------|----------|--------|--------|--------|
|                                     | Independent variables   |       | Coeff.   | t-stat | Coeff.                  | t-stat | Coeff.   | t-stat | Coeff. | t-stat |
| Constant                            | 10.416                  | 7.93  | 10.805   | 7.92   | 7.6                     | 8.28   | 7.763    | 8.35   |        |        |
| <b>Ownership</b>                    |                         |       |          |        |                         |        |          |        |        |        |
| Lagged Institution_own              | 0.346                   | 0.62  | -4.659** | -2.38  | -0.340                  | -0.91  | -1.314   | -1.16  |        |        |
| Lagged Foreign_own                  | -0.471                  | -0.74 | 2.510    | 1.19   | -0.433                  | -0.65  | 2.345    | 1.24   |        |        |
| Lagged Manager_own                  | 3.036**                 | 1.98  | 3.206    | 0.84   | -0.343                  | -0.45  | -1.195   | -0.5   |        |        |
| Lagged Government_own               | -1.004                  | -0.53 | -1.472   | -0.26  | -0.878                  | -0.91  | -3.418   | -1.25  |        |        |
| <b>Ownership</b>                    |                         |       |          |        |                         |        |          |        |        |        |
| Lagged squared Institution_own      |                         |       | 6.583*** | 2.82   |                         |        | 1.228    | 0.9    |        |        |
| Lagged squared Foreign_own          |                         |       | -3.518   | -1.56  |                         |        | -3.214   | -1.48  |        |        |
| Lagged squared Manager_own          |                         |       | -0.336   | -0.07  |                         |        | 1.485    | 0.42   |        |        |
| Lagged squared Government_own       |                         |       | 0.385    | 0.07   |                         |        | 2.938    | 1.03   |        |        |
| <b>Company characteristics</b>      |                         |       |          |        |                         |        |          |        |        |        |
| Firm size                           | 0.201                   | 0.73  | 0.213    | 0.79   | 0.240                   | 1.65   | 0.222    | 1.55   |        |        |
| Growth                              | 0.702**                 | 2.54  | 0.692**  | 2.51   | -0.334*                 | -1.77  | -0.332*  | -1.77  |        |        |
| Liquidity                           | -0.032                  | -0.56 | -0.027   | -0.47  | 0.027                   | 0.4    | 0.029    | 0.43   |        |        |
| Leverage                            | -0.087                  | -0.56 | -0.09    | -0.58  | 0.156                   | 1.46   | 0.156    | 1.45   |        |        |
| Profitability                       | -0.661                  | -0.43 | -0.644   | -0.43  | -4.033***               | -3.08  | -4.01*** | -3.06  |        |        |
| <b>Corporate governance factors</b> |                         |       |          |        |                         |        |          |        |        |        |
| Auditor                             | 0.734                   | 1.23  | 0.660    | 1.12   | 0.405                   | 0.97   | 0.399    | 0.95   |        |        |
| Board size                          | -0.071                  | -0.75 | -0.084   | -0.88  | -0.129                  | -1.64  | -0.139*  | -1.74  |        |        |
| Independence                        | -0.103                  | -0.07 | -0.081   | -0.06  | -0.282                  | -0.24  | -0.392   | -0.34  |        |        |
| Adjusted R-squared                  | 0.65%                   |       | 0.44%    |        | 1.84%                   |        | 1.39%    |        |        |        |
| Year and industry fixed effects     | Yes                     |       |          |        |                         |        |          |        |        |        |
| Number of observations              | 5,006                   |       |          |        |                         |        |          |        |        |        |
| Number of firms                     | 732                     |       |          |        |                         |        |          |        |        |        |

Notes: *Forlookpositive\_percent/ Forlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences respectively; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firm size* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Report size* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Board size* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

#### **5.4.2. The impact of country characteristics on the relationship between ownership structure and forward-looking disclosure**

##### *The impact of country income level*

The results are reported for the count and the percentage of forward-looking sentences in Table 5.20. The regression results show that institutional and foreign ownership are more significant in explaining forward-looking disclosure in high- and middle-income countries while managerial and government ownership are more likely to influence forward-looking disclosure in low-income countries.

A U-shaped association between institutional ownership and forward-looking disclosure, in both absolute and relative terms, is strongly significant in Singapore, the only high-income ASEAN country, at the 5% (coefficient = 0.405,  $t = 2.24$ ) and 10% level (coefficient = 0.024,  $t = 1.84$ ) respectively. In this group, Singapore is the financial hub of Asia (Schipke, 2015, p.3-4; Papageorgiou et al., 2015, p.59; Chowdhury et al., 2015, p.204-205). The stock market capitalisation in Singapore accounts for 25-30% of the total regional market capitalisation over the period 2009 to 2021 (World Federation of Exchanges, 2021). According to OECD (2018), the average institutional ownership in Singapore is highest in the region with 14% and a large share is attributed to foreign institutions. As discussed in Bushee and Noe (2000), low levels of ownership can be attributed to short-term institutional investors who have low incentives for monitoring corporate management while high levels of ownership are associated with long-term institutional shareholders who are more likely to pursue transparency to maximize long-term capital gains.

Another significant result reported for Singapore is that foreign ownership has an inverted U-shaped relationship with the count of forward-looking sentences at the 10% level (coefficient = -0.375;  $t = -1.86$ ), which is opposite to the effect of institutional ownership. This is consistent with the overall effect of foreign ownership on forward-looking disclosure discussed in Section 5.4.1.1, 5.4.1.2 and 5.4.1.3. According to UNCTAD (2018) and OECD (2019), Singapore is by far the biggest host market for foreign portfolio investment in the region. It is also noteworthy that the foreign ownership in Singapore is mainly focused on the

services industry and associated with investors from the US, the UK, and other European countries. These investors may want to signal their desire for transparency in the advanced stock market of Singapore at low levels of ownership, but this incentive is overcome by the proprietary costs associated with forward-looking disclosure when their ownership goes above a certain level.

In the upper middle-income country group, including Malaysia and Thailand, the results are consistent with the findings for Singapore but only significant for the relative disclosure measure, suggesting that institutional and foreign investors in ASEAN middle-income countries influence the relative focus of forward-looking disclosure. The U-shaped impact of institutional ownership is significant at the 5% level (coefficient = 0.018,  $t = 2.43$ ) while the impact of foreign ownership is inverted U-shaped and significant at the same level (coefficient = -0.023,  $t = -2.19$ ). The countries in this group are the two biggest commodity exporters in the region so their thriving export-oriented economies may attract more institutional investors than the other low-income nations (Schipke, 2015, p.3-4; Papageorgiou et al., 2015, p.59; Chowdhury et al., 2015, p.204-205). UNCTAD (2021) further shows that they receive more foreign investment than the other ASEAN low-income countries and Thailand has been increasing an attractive destination for cross-border M&As. An inverted U-shaped association between foreign ownership and forward-looking disclosure is also evidenced in the lower middle-income group at the 10% level but only when disclosure is measured in absolute terms (coefficient = -0.457,  $t = -1.95$ ), indicating that the impact is irrelevant to the annual report size.

In the poor country group, there is a U-shaped association between managerial ownership and forward-looking disclosure, in both absolute and relative terms at the 5% level (coefficient = 2.167,  $t = 2.2$ ) and at the 10% level (coefficient = 0.136,  $t = 1.9$ ) respectively, suggesting that managers entrench at low levels of shareholdings but exhibit greater disclosure when their ownership exceeds a certain level. This means the positive effect of managerial ownership on forward-looking disclosure exists when shareholdings are large enough to incentivise managers. This is in line with early disclosure studies such as Schleifer and Vishny (1997) and Chau and Gray (2010). OECD (2018) reports that the three countries in

this group, Indonesia, Philippines, and Vietnam, have much lower market turnover and stock liquidity than other Asian countries. These developing stock markets are characterised by ownership concentration, weak investor protection and poor transparency, leading to severe interest conflicts between majority and minority shareholders (Cheung et al., 2011; Oehmichen, 2018; ASEAN CSR Network, 2018; Transparency International, 2021; World Justice Project, 2021). The U-shaped association implies that managerial ownership plays an important role in aligning managers' interests with those of shareholders in underdeveloped ASEAN stock markets, hence provides support to agency theory.

In contrast, the inverted U-shaped effect of government ownership suggests that high government ownership reduces the relative amount of forward-looking information in annual reports (coefficient = -0.185,  $t = -2.16$  at the 5% level) while the result for the absolute measure is insignificant. This result supports the notion that government ownership weakens corporate governance in low-income ASEAN countries, especially Indonesia and Vietnam. According to Mak and Li (2001), government-linked companies are associated with non-profit goals, lack of exposure to corporate control market and weak monitoring by shareholders. These relaxing conditions reduce their incentives for performance accountability and transparency. In addition, the government uses its power to intervene into corporate governance such as appointing board members or regulating managerial performance benchmarks (Astami et al., 2010; Tu and Nguyen, 2021; OECD, 2018). This intervention weakens corporate governance and reduces public information demand.

**Table 5.20. The association between ownership structure and forward-looking disclosure by country income level**

| Dependent variable                  | Forwlook_count |        |                     |        |                     |        | Forwlook_percent |        |                     |        |                     |        |
|-------------------------------------|----------------|--------|---------------------|--------|---------------------|--------|------------------|--------|---------------------|--------|---------------------|--------|
|                                     | High-income    |        | Upper middle income |        | Lower middle income |        | High-income      |        | Upper middle income |        | Lower middle income |        |
| Country income level                | Coeff.         | t-stat | Coeff.              | t-stat | Coeff.              | t-stat | Coeff.           | t-stat | Coeff.              | t-stat | Coeff.              | t-stat |
| Constant                            | -4.106         | -8.38  | -5.681              | -17.74 | -4.508              | -8.47  | 0.052            | 6.78   | 0.073               | 14.33  | 0.037               | 3.5    |
| <b>Ownership</b>                    |                |        |                     |        |                     |        |                  |        |                     |        |                     |        |
| Lagged Institution_own              | -0.243         | -1.62  | -0.103              | -1.24  | -0.129              | -0.81  | -0.018*          | -1.66  | -0.014**            | -2.24  | -0.006              | -0.77  |
| Lagged Foreign_own                  | 0.252          | 1.31   | 0.183               | 1.19   | 0.273               | 1.24   | 0.012            | 1.1    | 0.022**             | 2.38   | -0.002              | -0.17  |
| Lagged Manager_own                  | 0.129          | 0.51   | 0.269               | 1.07   | -0.304              | -0.52  | 0.014            | 1.08   | 0.0004              | 0.03   | -0.023              | -0.58  |
| Lagged Government_own               | -0.958         | -1.62  | -0.356              | -1.56  | 2.579               | 1.59   | -0.059**         | -2.21  | -0.017              | -0.91  | 0.332***            | 3.19   |
| <b>Squared ownership</b>            |                |        |                     |        |                     |        |                  |        |                     |        |                     |        |
| Lagged Squared Institution_own      | 0.405**        | 2.24   | 0.125               | 1.27   | 0.232               | 1.2    | 0.024*           | 1.84   | 0.018**             | 2.43   | 0.008               | 0.9    |
| Lagged Squared Foreign_own          | -0.375*        | -1.86  | -0.186              | -1.13  | -0.457*             | -1.95  | -0.019           | -1.65  | -0.023**            | -2.19  | -0.014              | -1.3   |
| Lagged Squared Manager_own          | -0.056         | -0.19  | -0.464              | -1.15  | 2.167**             | 2.2    | -0.013           | -0.88  | -0.008              | -0.28  | 0.136*              | 1.9    |
| Lagged Squared Government_own       | 0.542          | 1.07   | 0.239               | 0.97   | -0.579              | -0.42  | 0.033            | 1.21   | 0.014               | 0.74   | -0.185**            | -2.16  |
| <b>Company characteristics</b>      |                |        |                     |        |                     |        |                  |        |                     |        |                     |        |
| Firmsize                            | 0.022          | 0.68   | -0.046**            | -2     | 0.022               | 1.31   | 0.0009           | 0.6    | -0.003***           | -3.59  | 0.002**             | 1.99   |
| Growth                              | 0.042*         | 1.89   | 0.03*               | 1.91   | -0.025              | -0.82  | 0.002*           | 1.87   | 0.001               | 1.23   | -0.0004             | -0.3   |
| Liquidity                           | -0.004         | -1.03  | -0.003              | -0.81  | 0.014*              | 1.79   | -0.00008         | -0.28  | -0.0003             | -0.93  | 0.00007             | 0.2    |
| Leverage                            | 0.0005         | 0.03   | 0.005               | 0.48   | -0.005              | -0.19  | 0.00006          | 0.07   | -0.0001             | -0.24  | 0.0002              | 0.25   |
| Profitability                       | 0.085          | 0.77   | -0.021              | -0.23  | -0.054              | -0.4   | -0.003           | -0.39  | -0.007              | -1.32  | -0.0005             | -0.1   |
| Reportsize                          | 0.786***       | 14.62  | 0.972***            | 30.71  | 0.855***            | 16.77  |                  |        |                     |        |                     |        |
| <b>Corporate governance factors</b> |                |        |                     |        |                     |        |                  |        |                     |        |                     |        |
| Auditor                             | 0.032          | 0.52   | -0.01               | -0.3   | 0.004               | 0.07   | 0.0004           | 0.13   | 0.002               | 0.82   | 0.003               | 0.77   |
| Boardsize                           | 0.016*         | 1.9    | -0.003              | -0.41  | 0.003               | 0.19   | 0.001**          | 1.99   | -0.0007*            | -1.75  | -0.0007             | -1.05  |
| Independence                        | 0.191          | 1.58   | 0.022               | 0.25   | -0.439              | -1.17  | 0.013*           | 1.69   | -0.003              | -0.59  | -0.018              | -1     |
| Adjusted R-squared                  | 56.05%         |        | 62.07%              |        | 54.16%              |        | 2.70%            |        | 1.11%               |        | 2.42%               |        |
| Year and industry fixed effects     | Yes            |        |                     |        |                     |        |                  |        |                     |        |                     |        |
| Number of observations              | 1,316          |        | 2,823               |        | 867                 |        | 1,316            |        | 2,823               |        | 867                 |        |
| Number of firms                     | 200            |        | 397                 |        | 135                 |        | 200              |        | 397                 |        | 135                 |        |

Notes: *Forwlook\_count/ Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

### *The impact of country legal system*

The regression results for ASEAN common-law and civil-law countries are reported in Table 5.21. The results are consistent when forward-looking disclosure is measured by the count and the percentage of sentences that the non-linearity between ownership and forward-looking disclosure is significant in common-law countries. There is, however, no significant result in the civil-law countries.

The strong U-shaped association between institutional ownership and forward-looking disclosure in the common law nations at the 1% level (coefficient = 0.254,  $t = 2.7$  for the absolute disclosure measure; coefficient = 0.022,  $t = 3.06$  for the relative disclosure measure) suggests that institutional shareholdings promote corporate transparency when they are large enough. Common law countries in the ASEAN includes Singapore and Malaysia which are heavily influenced by the British colonial administration in the past. According to Craig and Diga (1996), typical characteristics of a common law system are still strongly present in their current effective laws. This type of legal system is associated with strong investor protection and legal enforcement (La Porta et al., 1998). World rankings indicate that there is large gap in the regulatory quality and governance between these two countries and the other ASEAN country members (World Bank Database, 2022; World Justice Project, 2021; Transparency International, 2021). While Singapore maintains its position in the world top level of transparency, Malaysia is always ranked second in the region for its governance standards. Institutional investors may have more incentives to influence corporate disclosure where governance practices are more in line with globally recognised standards.

Government ownership has a similar effect on forward-looking disclosure as institutional ownership in the common law countries at the 10% level (coefficient = 0.378,  $t = 1.69$ ) but only when the count measure is employed. This result indicates that firms with high government ownership exhibit greater forward-looking disclosure than those with low government ownership. The effect changes its direction at a turning point of government ownership. This result confirms the finding in Section 5.4.1.1 that the negative effect of government ownership is



associated with ASEAN countries with poor legal enforcement. When the sample is split by legal system, government ownership presents a positive impact on disclosure in common law countries. This finding supports previous studies in Singapore (Ang and Ding, 2006) and Malaysia (Tam and Tan, 2007; Ismail and Sinnadurai, 2012) that the governments play an active role in promoting corporate transparency but further adds that the positive effect only exists when government shareholdings are large enough.

Meanwhile, the inverted U-shaped association between foreign ownership and forward-looking disclosure at the 1% level (coefficient = -0.456,  $t = -3.21$  for the count measure; coefficient = -0.029,  $t = -3.18$  for the percent measure) implies different strategies employed by foreign investors in Singapore and Malaysia. These nations have less restrictions on foreign equity capital compared to the civil-law counterparts (UNCTAD, 2018; OECD, 2019). Under these liberal conditions, foreign investors are more likely to make large investments and have incentives to influence corporate disclosure. The result indicates that foreign shareholders encourage firms to discuss more forward-looking information at low levels of ownership but that impact turns negative when their ownership exceeds a turning point. While small foreign investors rely on public disclosures to penetrate the local markets, large foreign investors have better private access to information and therefore less likely use public disclosures in decision-making.

Insignificant results for the civil law group show the weak role of ownership in explaining forward-looking disclosure in civil law ASEAN countries, including Indonesia, Thailand, Philippines and Vietnam. World Justice Project (2021) reports that the rule of law indices in these countries are relatively lower than in the common law countries. Transparency International (2018) also reports that these countries are highly corrupt and exhibit negligible improvements over the period 2009 to 2017. Although the regulatory frameworks in Thailand and Philippines are relatively strong, some studies have found that well-drafted regulations are merely the result of formal acceptance rather than actual implementation (Chuanrommanee and Swierczek, 2007; Fadillah and Djaddang, 2017). Firms

under this weakly governed environment have low incentives to engage in transparent practice and shareholders may entrench to save disclosure costs.

Among control variables, only sales growth is significantly and positively associated with forward-looking disclosure in common law countries, confirming the findings in previous sections that growing firms exert greater disclosure in exchange for greater access to external finance. Corporate governance factors have no significant impact on forward-looking disclosure, regardless of country differences in legal system. This result does not support previous findings that firms are more likely to pursue transparency in strong corporate governance systems but support Fadillah and Djaddang (2017) that compliance with disclosure regulations is not high as expected under strong legal frameworks in ASEAN countries.

**Table 5.21. The association between ownership structure and forward-looking disclosure by country legal system**

| Dependent variable                  | Forwlook_count |        |           |        | Forwlook_percent |        |           |        |
|-------------------------------------|----------------|--------|-----------|--------|------------------|--------|-----------|--------|
|                                     | Common law     |        | Civil law |        | Common law       |        | Civil law |        |
| Country legal system                | Coeff.         | t-stat | Coeff.    | t-stat | Coeff.           | t-stat | Coeff.    | t-stat |
| Independent variables               | Coeff.         | t-stat | Coeff.    | t-stat | Coeff.           | t-stat | Coeff.    | t-stat |
| Constant                            | -5.333         | -17.39 | -4.610    | -11.96 | 0.068            | 13.99  | 0.050     | 9.43   |
| <b>Ownership</b>                    |                |        |           |        |                  |        |           |        |
| Lagged Institution_own              | -0.182**       | -2.3   | 0.032     | 0.23   | -0.018***        | -2.88  | -0.003    | -0.46  |
| Lagged Foreign_own                  | 0.399***       | 3      | 0.092     | 0.55   | 0.025***         | 2.94   | 0.005     | 0.64   |
| Lagged Manager_own                  | 0.106          | 0.58   | -0.035    | -0.09  | 0.007            | 0.66   | -0.027    | -1.15  |
| Lagged Government_own               | -0.468**       | -2.02  | 0.466     | 0.71   | -0.024           | -1.24  | 0.005     | 0.14   |
| <b>Squared ownership</b>            |                |        |           |        |                  |        |           |        |
| Lagged Squared Institution_own      | 0.254***       | 2.7    | 0.009     | 0.05   | 0.022***         | 3.06   | 0.005     | 0.72   |
| Lagged Squared Foreign_own          | -0.456***      | -3.21  | -0.287    | -1.53  | -0.029***        | -3.18  | -0.019    | -2.32  |
| Lagged Squared Manager_own          | -0.097         | -0.38  | 0.909     | 1.18   | -0.011           | -0.72  | 0.088     | 1.85   |
| Lagged Squared Government_own       | 0.378*         | 1.69   | -0.847    | -0.96  | 0.018            | 1.03   | -0.005    | -0.11  |
| <b>Company characteristics</b>      |                |        |           |        |                  |        |           |        |
| Firmsize                            | 0.014          | 0.53   | -0.003    | -0.16  | 0.0003           | 0.24   | 0.0004    | 0.44   |
| Growth                              | 0.039***       | 2.65   | -0.016    | -0.74  | 0.002**          | 2.04   | -0.0003   | -0.34  |
| Liquidity                           | -0.003         | -0.81  | -0.003    | -0.46  | -0.0001          | -0.45  | -0.0004   | -1.27  |
| Leverage                            | -0.006         | -0.66  | 0.009     | 0.56   | -0.0006          | -1.03  | 0.0004    | 0.66   |
| Profitability                       | 0.041          | 0.5    | -0.014    | -0.12  | -0.007           | -1.45  | 0.0002    | 0.04   |
| Reportsize                          | 0.932***       | 28.52  | 0.861     | 22.75  |                  |        |           |        |
| <b>Corporate governance factors</b> |                |        |           |        |                  |        |           |        |
| Auditor                             | 0.013          | 0.36   | 0.006     | 0.16   | 0.001            | 0.6    | 0.002     | 0.98   |
| Boardsize                           | 0.007          | 1.23   | -0.006    | -0.7   | -0.00001         | -0.02  | -0.0007   | -1.75  |
| Independence                        | 0.079          | 0.95   | -0.087    | -0.72  | 0.004            | 0.64   | -0.007    | -1.25  |
| Adjusted R-squared                  | 69.78%         |        | 64.30%    |        | 1.20%            |        | 1.03%     |        |
| Year and industry fixed effects     | Yes            |        |           |        |                  |        |           |        |
| Number of observations              | 3,110          |        | 1,896     |        | 3,110            |        | 1,896     |        |
| Number of firms                     | 449            |        | 283       |        | 449              |        | 283       |        |

Notes: *Forwlook\_count/ Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

### 5.4.3. Additional analysis: The impact of IFRS adoption

As an additional analysis, the thesis extends to examine how the adoption of IFRSs affects the level of forward-looking disclosure in ASEAN countries. In Table 5.22, regression results are reported when the dummy variable of IFRS adoption is included in the models. As being too small, the coefficients for the models using the percentage of forward-looking sentences as the dependent variable are multiplied with 1,000 to ease the interpretation of results. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

The results indicate that IFRS adoption is significant in explaining variations in forward-looking disclosure in ASEAN countries. A negative association is observed between the application of IFRSs and the number of forward-looking sentences in ASEAN firms' annual reports at the 5% level (coefficient = -0.038 ~ -0.039,  $t = -2.1$ ) while a positive association is observed for the percentage of forward-looking sentences at the 1 % level (coefficients = 7.333 ~ 7.257,  $t = 6.72 \sim 6.62$ ). This result suggests that IFRS-adopted firms are more likely to increase the amount of prospective narrative information in line with the report length compared to non-adopters. The application of high-quality accounting standards induces managers to improve the informativeness of disclosure and thereby reduces agency costs between managers and shareholders. This finding is consistent with agency theory, signalling theory and prior empirical studies (Miikinen, 2012; Horton et al., 2013; Bruslerie and Gabteni, 2014; Hlel et al., 2019; Alsheikh et al., 2021; Rouhou et al., 2021). This result also supports Efreteui et al. (2022) which finds that IFRS adoption increases the complexity of narrative reporting through which managers have incentives to provide incremental prospective information to support users' interpretation of business results.

Meanwhile, the negative coefficients for the count measure indicate some overlap in the information content of voluntary and mandatory disclosures as documented in Ledoux and Cormier (2013). Firms reduce the room for some specific forward-looking content covered in IFRS-based financial statements while making more

disclosures about other future-related aspects. Moreover, the mixed results may imply low levels of voluntary disclosure after the introduction of IFRSs in several ASEAN countries such as Philippines and Thailand. IFRS adoption was mandated in these countries in 2010 and 2011 respectively so the study period mainly covers the early years of adoption. The favourable impact of IFRS adoption is not immediate for these countries due to low compliance, lack of experience and weak enforcement during the first few years. Similar results are documented in previous studies (Salewski et al., 2016; Zhaoyang et al., 2019; Boateng et al., 2022). Furthermore, the opposite results for the two measures of forward-looking disclosure suggest that the positive effect of IFRS adoption in ASEAN countries is only observed when the level of forward-looking disclosure changes with the size of the annual report.

**Table 5.22. The impact of IFRS adoption on forward-looking disclosure**

| Dependent variable<br>Independent variables | Forwlook_count  |             |                 |              | Forwlook_percent |             |                 |             |
|---|-----------------|-------------|-----------------|--------------|------------------|-------------|-----------------|-------------|
|   | Coeff.          | t-stat      | Coeff.          | t-stat       | Coeff.           | t-stat      | Coeff.          | t-stat      |
| Constant                                    | -4.919          | -22.97      | -4.935          | -23.21       | 38.934           | 10.93       | 38.846          | 10.89       |
| <b>Ownership</b>                            |                 |             |                 |              |                  |             |                 |             |
| Lagged Institution_own                      | 0.054**         | 2.52        | -0.063          | -0.95        | 0.439            | 0.31        | -9.078**        | -2.04       |
| Lagged Foreign_own                          | -0.029          | -1.08       | 0.223**         | 2.45         | -5.254***        | -3.46       | 5.924           | 1.11        |
| Lagged Manager_own                          | 0.027           | 0.45        | -0.053          | -0.38        | 4.998*           | 1.69        | 6.496           | 0.79        |
| Lagged Government_own                       | 0.058           | 1.14        | 0.259*          | 1.7          | 3.972            | 1.27        | 20.963**        | 1.96        |
| <b>Squared ownership</b>                    |                 |             |                 |              |                  |             |                 |             |
| Lagged squared Institution_own              |                 |             | 0.147*          | 1.84         |                  |             | 12.183**        | 2.24        |
| Lagged squared Foreign_own                  |                 |             | -0.298***       | -2.95        |                  |             | -13.102**       | -2.19       |
| Lagged squared Manager_own                  |                 |             | 0.146           | 0.65         |                  |             | -2.413          | -0.18       |
| Lagged squared Government_own               |                 |             | -0.251          | -1.47        |                  |             | -21.224*        | -1.79       |
| <b>IFRS_adopt</b>                           | <b>-0.038**</b> | <b>-2.1</b> | <b>-0.039**</b> | <b>-2.14</b> | <b>7.333***</b>  | <b>6.72</b> | <b>7.257***</b> | <b>6.62</b> |
| <b>Company characteristics</b>              |                 |             |                 |              |                  |             |                 |             |
| Firmsize                                    | 0.021***        | 2.86        | 0.019***        | 2.68         | 0.139            | 0.36        | 0.078           | 0.2         |
| Growth                                      | 0.017           | 1.27        | 0.017           | 1.26         | 1.343**          | 2.01        | 1.318**         | 1.97        |
| Liquidity                                   | -0.001          | -0.38       | -0.0008         | -0.27        | 0.019            | 0.1         | 0.035           | 0.19        |
| Leverage                                    | -0.002          | -0.2        | -0.001          | -0.16        | -0.436           | -1.1        | -0.419          | -1.05       |
| Profitability                               | 0.026           | 0.41        | 0.025           | 0.4          | -7.022**         | -2          | -7.093**        | -2.01       |
| Reportsize                                  | 0.892***        | 42.2        | 0.893***        | 42.56        |                  |             |                 |             |
| <b>Corporate governance factors</b>         |                 |             |                 |              |                  |             |                 |             |
| Auditor                                     | 0.027           | 1.29        | 0.026           | 1.23         | 2.534**          | 2.06        | 2.441**         | 1.98        |
| Boardsize                                   | -0.009**        | -2.33       | -0.009***       | -2.56        | -0.317           | -1.52       | -0.359*         | -1.72       |
| Independence                                | 0.034           | 0.59        | 0.028           | 0.49         | 12.386           | 3.48        | 12.156***       | 3.44        |
| Adjusted R-squared                          | 70.62%          |             | 71.84%          |              | 17.68%           |             | 17.37%          |             |
| Year and industry fixed effects             | Yes             |             |                 |              |                  |             |                 |             |
| Number of observations                      | 5,006           |             |                 |              |                  |             |                 |             |
| Number of firms                             | 732             |             |                 |              |                  |             |                 |             |

Notes: *Forwlook\_count/ Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *IFRS\_adopt* is a dummy variable, equals 1 if the country adopts IFRSs in financial reporting and 0 otherwise; *Firmsize* is a company's total assets scaled by the country's total; *Growth*

is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

To further examine the mediating role of IFRS application on the ownership-disclosure association, the interaction terms between IFRS adoption and four ownership variables are added to the models. Regression results in Table 5.23 indicate managerial ownership negatively influences the extent of forward-looking information in IFRS-adopted firms at the 5% level for the models with the count of forward-looking sentences (coefficient = -0.203,  $t = -2.06 \sim -2.09$ ) and at the 1% level for the models with the percentage of forward-looking sentences (coefficients = -14.311  $\sim$  -14.219;  $t = -3.01 \sim -3.02$ ) while the coefficients for the remaining interaction variables are insignificant. This result implies managers' attempt to balance the costs and benefits of disclosure when holding shares in the company. Share incentives induce managers respond more actively to mandatory disclosure requirements to avoid litigation costs whereas discourage them from providing excessive voluntary disclosure, such as forward-looking information, to reduce proprietary costs. This thesis therefore supports the substitute effect of IFRS adoption on voluntary disclosure in annual report in firms with managerial ownership as documented in Zhaoyang et al. (2019) and Boateng et al. (2022).

**Table 5.23. The mediating impact of IFRS on the association between ownership structure and forward-looking disclosure**

| Dependent variable                  | Forwlook_count        |              |                  |              | Forwlook_percent |              |                  |              |
|-------------------------------------|-----------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
|                                     | Independent variables |              | Coeff.           | t-stat       | Coeff.           | t-stat       | Coeff.           | t-stat       |
| Constant                            | -4.827                | -22.15       | -4.852           | -22.40       | 31.373           | 8.35         | 31.167           | 8.27         |
| <b>Ownership</b>                    |                       |              |                  |              |                  |              |                  |              |
| Lagged Institution_own              | 0.071*                | 1.70         | -0.048           | -0.64        | 0.859            | 0.50         | -9.539**         | -2.17        |
| Lagged Foreign_own                  | -0.034                | -0.63        | 0.225**          | 2.17         | -7.299           | -2.85        | 7.237            | 1.27         |
| Lagged Manager_own                  | 0.219*                | 1.87         | 0.151            | 0.98         | 15.216           | 2.64         | 12.193           | 1.35         |
| Lagged Government_own               | 0.028                 | 0.31         | 0.262            | 1.58         | 0.159            | 0.03         | 8.701            | 0.72         |
| <b>Squared ownership</b>            |                       |              |                  |              |                  |              |                  |              |
| Lagged squared Institution_own      |                       |              | 0.159**          | 2.03         |                  |              | 13.871***        | 2.61         |
| Lagged squared Foreign_own          |                       |              | -0.305***        | -3.02        |                  |              | -17.184***       | -2.90        |
| Lagged squared Manager_own          |                       |              | 0.125            | 0.57         |                  |              | 5.166            | 0.38         |
| Lagged squared Government_own       |                       |              | -0.284*          | -1.66        |                  |              | -10.405          | -0.89        |
| <b>IFRS_adopt</b>                   | <b>-0.135***</b>      | <b>-3.16</b> | <b>-0.128***</b> | <b>-2.98</b> | <b>29.718***</b> | <b>12.13</b> | <b>30.201***</b> | <b>12.12</b> |
| <b>Interaction terms</b>            |                       |              |                  |              |                  |              |                  |              |
| IFRS x Lagged Institution_own       | -0.019                | -0.44        | -0.029           | -0.66        | -0.386           | -0.18        | -0.858           | -0.41        |
| IFRS x Lagged Foreign_own           | 0.009                 | 0.16         | 0.011            | 0.19         | 3.134            | 1.10         | 3.288            | 1.18         |
| IFRS x Lagged Manager_own           | -0.203**              | -2.06        | -0.203**         | -2.09        | -14.311**        | -3.01        | -14.219**        | -3.02        |
| IFRS x Lagged Government_own        | 0.039                 | 0.47         | 0.033            | 0.42         | 3.257            | 0.59         | 2.771            | 0.51         |
| <b>Company characteristics</b>      |                       |              |                  |              |                  |              |                  |              |
| Firmsize                            | 0.021***              | 2.89         | 0.019***         | 2.69         | 0.763            | 1.62         | 0.703            | 1.48         |
| Growth                              | 0.019                 | 1.44         | 0.019            | 1.41         | 1.214            | 1.80         | 1.179*           | 1.75         |
| Liquidity                           | -0.001                | -0.40        | -0.0008          | -0.30        | -0.064           | -0.34        | -0.045           | -0.24        |
| Leverage                            | -0.003                | -0.43        | -0.003           | -0.38        | -0.366           | -0.93        | -0.352           | -0.89        |
| Profitability                       | 0.007                 | 0.11         | 0.007            | 0.12         | -6.945           | -1.97        | -6.893**         | -1.96        |
| Reportsize                          | 0.885***              | 42.10        | 0.886***         | 42.41        |                  |              |                  |              |
| <b>Corporate governance factors</b> |                       |              |                  |              |                  |              |                  |              |
| Auditor                             | 0.031                 | 1.46         | 0.029            | 1.37         | 1.844            | 1.49         | 1.727            | 1.39         |
| Boardsize                           | -0.005                | -1.31        | -0.006           | -1.56        | -1.011***        | -4.46        | -1.054***        | -4.66        |
| Independence                        | 0.079                 | 1.25         | 0.071            | 1.14         | 1.267            | 0.31         | 0.923            | 0.23         |
| Adjusted R-squared                  | 71.12%                |              | 71.20%           |              | 22.09%           |              | 21.86%           |              |
| Year and industry fixed effects     | Included              |              |                  |              |                  |              |                  |              |
| Number of observations              | 4,890                 |              |                  |              |                  |              |                  |              |
| Number of firms                     | 732                   |              |                  |              |                  |              |                  |              |

Notes: *Forwlook\_count/ Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *IFRS\_adopt* is a dummy variable, equals 1 if the country adopts IFRSs in financial reporting and 0 otherwise; *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

## 5.5. Summary

In summary, this chapter has discussed empirical results about the effect of ownership structure on forward-looking disclosure in ASEAN listed companies. The results are presented in three parts: descriptive statistics, bivariate analysis, and multivariate analysis. The descriptive statistics have provided an insight into the level of forward-looking disclosure among ASEAN firms. It is in line with previous studies that forward-looking information is generally low in narrative sections of annual reports, in both absolute and relative terms. About the topics of disclosure, ASEAN firms communicate more about financial performance and corporate environment than strategy and structure, and the positive tone dominates the negative tone in their forward-looking statements. Pearson correlation matrix has shown high correlations between pairs of dependent and independent variables.

**Table 5.24. Summary of the findings about the impact of ownership structure on forward-looking disclosure**

|    | <b>Hypothesis</b>  | <b>Expected sign</b> | <b>Result</b>               |
|----|--|----------------------|-----------------------------|
| 1a | There is a positive association between institutional ownership and the extent of forward-looking information disclosed by firms   | +                    | Rejected                    |
| 1c | There is a non-linear association between institutional ownership and the extent of forward-looking information disclosed by firms | ?                    | Accepted (U shape)          |
| 2a | There is a positive association between foreign ownership and the extent of forward-looking information disclosed by firms         | +                    | Rejected                    |
| 2c | There is a non-linear association between foreign ownership and the extent of forward-looking information disclosed by firms       | ?                    | Accepted (inverted U shape) |
| 3a | There is a negative association between managerial ownership and the extent of forward-looking information disclosed by firms      | -                    | Rejected                    |
| 3c | There is a non-linear association between managerial ownership and the extent of forward-looking information disclosed by firms    | ?                    | Rejected                    |
| 4a | There is a positive association between government ownership and the extent of forward-looking information disclosed by firms      | +                    | Rejected                    |
| 4c | There is a non-linear association between government ownership and the extent of forward-looking information disclosed by firms    | ?                    | Rejected                    |

The hypotheses tested in this chapter and the results are summarised in Table 5.24. It is indicated that the non-linear association between institutional ownership (foreign ownership) and forward-looking disclosure is strongly significant, implying that incentives for disclosure are driven by investment strategies adopted by institutional and foreign investors in ASEAN countries. The involvement of foreign institutions and the growth of cross-border M&A in ASEAN equity markets



complicate the effect of these ownership types on the extent of forward-looking information. Meanwhile, government ownership is more likely to influence forward-looking disclosure in low income and civil law ASEAN country members in which government ownership is more prevalent. The overall negative impact demonstrates that government-owned firms are associated with poor transparency due to soft budget constraints and the priority of non-profit investment objectives. Compared to the other ownership types, managerial ownership plays a trivial role in explaining forward-looking disclosure in ASEAN countries. In the next chapter, regression results about the impact of ownership structure on risk disclosure by ASEAN firms are reported and discussed.

## **CHAPTER 6: EMPIRICAL FINDINGS ABOUT THE IMPACT OF OWNERSHIP STRUCTURE ON RISK DISCLOSURE IN ASEAN LISTED FIRMS**

### **6.1. Introduction**

This chapter reports and discusses regression results for the impact of ownership structure on risk disclosure in ASEAN listed firms. The chapter begins with providing descriptive statistics of risk disclosure variables. This is followed by a bivariate analysis for risk disclosures and all independent variables to discover potential statistical association between risk disclosure and ownership structure. Multivariate regression results are then reported for the ownership impact on the overall level of risk disclosure, the extent of forward-looking risk information, the extent of quantitative risk information and the tone of risk disclosure. The regressions aim to test hypotheses 1b, 2b, 3b, 4b regarding the linearity, and hypotheses 1d, 2d, 3d, 4d regarding the nonlinearity between institutional, foreign, managerial and government ownership and the extent of risk disclosure respectively, as developed in Section 3.4.1 of Chapter 3. Country factors, including income level and legal system, are employed to further analyse the impact of country differences on ASEAN listed firms' risk disclosure practice.

### **6.2. Descriptive statistics of risk disclosure variables**

Table 6.1 shows that there is an average of 56 risk-related sentences in annual reports of ASEAN listed firms but the amount of risk information varies across firms, as shown by high standard deviations. When risk disclosure is measured in relative terms, the descriptive statistics show that there is an average 5.71% of ASEAN firms' annual report narratives is related to risk information with a median of 5.17%. This level is largely different among ASEAN firms and relatively close to the average level of forward-looking disclosure reported in Section 5.2.1 of Chapter 5. While forward-looking information is spread over an annual report, risk information is more commonly discussed in a separate section by ASEAN firms. In the random sample of 20 annual reports, the manual analysis shows that a

majority of listed companies in Thailand, Singapore and Malaysia have a risk section in their annual reports in which they identify risk factors and discuss their risk management approaches. In the other countries, this is not a common practice though.

**Table 6.1. Descriptive statistics of risk disclosure variables**

|                             | Variable             | Obs   | Mean  | Median | Std. Dev. | Min   | Max    |
|-----------------------------|----------------------|-------|-------|--------|-----------|-------|--------|
| Overall level               | Risk_count           | 6,569 | 56.44 | 40     | 53.31     | 1     | 797    |
|                             | Risk_percent         | 6,569 | 5.71% | 5.17%  | 2.94%     | 0.60% | 39.63% |
| Qualitative characteristics | Riskforwlook_count   | 6,569 | 6.78  | 4      | 12.42     | 0     | 255    |
|                             | Riskforwlook_percent | 6,569 | 0.03% | 0.19%  | 0.08%     | 0.00% | 5.78%  |
|                             | Riskquan_count       | 6,569 | 42.82 | 24     | 56.61     | 0     | 705    |
|                             | Riskquan_percent     | 6,569 | 0.19% | 0.10%  | 0.60%     | 0.00% | 13.65% |
| Tone                        | Riskpositive_count   | 6,569 | 5.69  | 4      | 8.35      | 0     | 448    |
|                             | Riskpositive_percent | 6,569 | 0.03% | 0.02%  | 0.02%     | 0.00% | 0.35%  |
|                             | Risknegative_count   | 6,569 | 16.13 | 9.7    | 23.38     | 0     | 471    |
|                             | Risknegative_percent | 6,569 | 0.08% | 0.06%  | 0.10%     | 0.00% | 1.41%  |
|                             | Risk_tone            | 6,409 | -0.38 | -0.43  | 0.41      | -1    | 1      |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Riskforwlook\_count/Riskforwlook\_percent* is the count/percentage of forward-looking words in risk-related sentences; *Riskquan\_count/Riskquan\_percent* is the count/percentage of quantitative words in risk-related sentences; *Riskpositive\_count/Riskpositive\_percent* is the count/percentage of positive words in risk-related sentences; *Risknegative\_count/Risknegative\_percent* is the count/percentage of negative words in risk-related sentences respectively; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences.

Regarding the qualitative dimensions of risk disclosure, ASEAN firms generally pay more attention to the quantification of risk information than the time horizon. There is an average of 42 quantitative words or 0.19% of risk-related sentences providing information in quantitative terms. Meanwhile, only average 6 forward-looking words or 0.03% of risk-related sentences are used by ASEAN firms to inform readers of future-related risk information. This is consistent with previous studies which report that risk disclosure is mainly backward-looking or non-time specific (Beattie et al., 2004; Beretta and Bozzolan, 2004; Linsley and Shrides, 2006; Jia et al., 2019).

By tone, risk disclosure by ASEAN firms contains more negative news than good news. The mean of negative words is 16.13 which more than doubles the mean of 5.69 positive words. Consequently, the average net tone is negative at -0.38 with a median of -0.43. There are less observations for this variable (N = 6,409) because few observations come with no positive and negative words, making the net tone measure undefined. By construction, a net tone of zero means tone neutrality as

the number of positive words equates the number of negative words. The result suggests that the net tone of risk disclosure in ASEAN firms' annual reports is altogether more negative than positive. This is consistent with the prevailing negative tone of risk disclosure in US firms (Elsayed and Elshandidy, 2021) and UK firms (Elshandidy and Zeng, 2021) but inconsistent with the overall positive tone of risk disclosure in Italian firms (Beretta and Bozzolan, 2004). The medians and standard deviations show that the tone of risk disclosure varies across ASEAN firms to a large extent.

Table 6.2 shows that there are significant differences in corporate risk reporting practice among ASEAN countries. The highest level of risk information is exhibited by firms in Indonesia with an average of 94 risk sentences in their annual reports, closely followed by Thai firms with 87 sentences. The figures in Malaysia and Singapore are much lower at 37 and 34 sentences, respectively. Nevertheless, the findings are different when risk disclosure is measured in relative terms. The percentage of risk-related sentences in annual reports of Malaysian and Indonesian firms are the lowest in the region with 4.53% and 5.71% respectively, suggesting that the amount of risk information in these countries is low relatively to the length of the annual report. The ratio of risk-related sentences discussed by firms in Philippines and Thailand is the highest with above 7% on average. Collectively, the descriptive statistics show that the level of risk disclosure in Malaysia and Singapore is not higher than in the other ASEAN country members as expected.

Concerning the qualitative dimensions of risk disclosure, forward-looking risk disclosure is generally limited in all countries while quantitative risk information is more available in Thailand, Singapore and Philippines, suggesting that firms in these countries make more efforts in measuring risks and sharing risk information in quantitative terms to the public. Regarding the tone of risk disclosure, Thai firms exhibit greater disclosure of both negative and positive risk information in their annual reports than any other countries. The net tone of risk disclosure is negative in all countries and Thai firms exhibit the largest extent of negative sentiment in their risk statements.

**Table 6.2. Descriptive statistics of risk disclosure variables by country**

|  | Indonesia (N=1,068)  |       |           |       |        | Singapore (N=1,714)  |       |           |       |        |
|--|----------------------|-------|-----------|-------|--------|----------------------|-------|-----------|-------|--------|
|  | Variable             | Mean  | Std. Dev. | Min   | Max    | Variable             | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count           | 94.08 | 83.49     | 3     | 797    | Risk_count           | 37.27 | 25.00     | 1     | 189    |
|  | Risk_percent         | 5.71% | 2.94%     | 0.60% | 39.63% | Risk_percent         | 6.51% | 2.89%     | 0.60% | 20.79% |
|  | Riskforwlook_count   | 17.52 | 25.82     | 0     | 255    | Riskforwlook_count   | 3.25  | 3.44      | 0     | 30     |
|  | Riskforwlook_percent | 0.03% | 0.08%     | 0.00% | 5.78%  | Riskforwlook_percent | 0.03% | 0.14%     | 0.00% | 5.78%  |
|  | Riskquan_count       | 72.59 | 73.21     | 0     | 649    | Riskquan_count       | 24.93 | 20.26     | 0     | 179    |
|  | Riskquan_percent     | 0.19% | 0.60%     | 0.00% | 13.65% | Riskquan_percent     | 0.18% | 0.17%     | 0.00% | 1.17%  |
|  | Riskpositive_count   | 5.78  | 15.95     | 0     | 448    | Riskpositive_count   | 3.30  | 3.14      | 0     | 24     |
|  | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.35%  | Riskpositive_percent | 0.03% | 0.03%     | 0.00% | 0.35%  |
|  | Risknegative_count   | 14.47 | 30.64     | 0     | 448    | Risknegative_count   | 10.08 | 9.65      | 0     | 124    |
|  | Risknegative_percent | 0.08% | 0.10%     | 0.00% | 1.41%  | Risknegative_percent | 0.09% | 0.07%     | 0.00% | 0.61%  |
|  | Risk_tone (N=1,015)  | -0.38 | 0.44      | -1    | 1      | Risk_tone (N=1,648)  | -0.41 | 0.49      | -1    | 1      |
|  | Malaysia (N=2,149)   |       |           |       |        | Thailand (N=1,273)   |       |           |       |        |
|  | Variable             | Mean  | Std. Dev. | Min   | Max    | Variable             | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count           | 34.86 | 29.91     | 2     | 221    | Risk_count           | 87.15 | 46.24     | 6     | 277    |
|  | Risk_percent         | 4.53% | 1.66%     | 0.71% | 14.86% | Risk_percent         | 7.36% | 3.71%     | 1.64% | 39.63% |
|  | Riskforwlook_count   | 4.45  | 4.81      | 0     | 43     | Riskforwlook_count   | 7.05  | 7.14      | 0     | 63     |
|  | Riskforwlook_percent | 0.03% | 0.02%     | 0.00% | 0.21%  | Riskforwlook_percent | 0.02% | 0.02%     | 0.00% | 0.27%  |
|  | Riskquan_count       | 14.76 | 16.01     | 0     | 159    | Riskquan_count       | 88.18 | 56.24     | 0     | 383    |
|  | Riskquan_percent     | 0.07% | 0.05%     | 0.00% | 0.44%  | Riskquan_percent     | 0.45% | 1.29%     | 0.00% | 13.65% |
|  | Riskpositive_count   | 5.15  | 3.77      | 0     | 37     | Riskpositive_count   | 10.64 | 8.42      | 0     | 60     |
|  | Riskpositive_percent | 0.04% | 0.02%     | 0.00% | 0.15%  | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.13%  |
|  | Risknegative_count   | 12.49 | 21.52     | 0     | 471    | Risknegative_count   | 35.02 | 25.49     | 0     | 181    |
|  | Risknegative_percent | 0.09% | 0.15%     | 0.00% | 1.41%  | Risknegative_percent | 0.12% | 0.07%     | 0.00% | 0.56%  |
|  | Risk_tone (N=2,144)  | -0.31 | 0.34      | -1    | 1      | Risk_tone (N=1,271)  | -0.52 | 0.24      | -1    | 1      |
|  | Philippines (N=189)  |       |           |       |        | Vietnam (N=176)      |       |           |       |        |
|  | Variable             | Mean  | Std. Dev. | Min   | Max    | Variable             | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count           | 63.46 | 74.64     | 1     | 367    | Risk_count           | 48.72 | 24.55     | 5     | 169    |
|  | Risk_percent         | 7.56% | 4.64%     | 0.89% | 27.09% | Risk_percent         | 6.94% | 2.60%     | 1.21% | 15.87% |
|  | Riskforwlook_count   | 3.37  | 3.80      | 0     | 26     | Riskforwlook_count   | 6.21  | 5.54      | 0     | 36     |
|  | Riskforwlook_percent | 0.02% | 0.02%     | 0.00% | 0.09%  | Riskforwlook_percent | 0.05% | 0.21%     | 0.00% | 2.85%  |
|  | Riskquan_count       | 68.86 | 145.79    | 0     | 705    | Riskquan_count       | 22.73 | 16.88     | 0     | 80     |
|  | Riskquan_percent     | 0.27% | 0.36%     | 0.00% | 1.68%  | Riskquan_percent     | 0.12% | 0.10%     | 0.00% | 0.48%  |
|  | Riskpositive_count   | 3.38  | 3.75      | 0     | 16     | Riskpositive_count   | 1.96  | 2.48      | 0     | 16     |
|  | Riskpositive_percent | 0.02% | 0.02%     | 0.00% | 0.10%  | Riskpositive_percent | 0.02% | 0.02%     | 0.00% | 0.11%  |
|  | Risknegative_count   | 6.43  | 7.35      | 0     | 33     | Risknegative_count   | 3.30  | 3.52      | 0     | 16     |
|  | Risknegative_percent | 0.04% | 0.04%     | 0.00% | 0.24%  | Risknegative_percent | 0.03% | 0.03%     | 0.00% | 0.13%  |
|  | Risk_tone (N=170)    | -0.05 | 0.62      | -1    | 1      | Risk_tone (N=161)    | -0.15 | 0.66      | -1    | 1      |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Riskforwlook\_count/Riskforwlook\_percent* is the count/percentage of forward-looking words in risk-related sentences; *Riskquan\_count/Riskquan\_percent* is the count/percentage of quantitative words in risk-related sentences; *Riskpositive\_count/Riskpositive\_percent* is the count/percentage of positive words in risk-related sentences; *Risknegative\_count/Risknegative\_percent* is the count/percentage of negative words in risk-related sentences respectively; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences.

When descriptive statistics of risk disclosure variables is viewed by year (Table 6.3), the overall trend is that the average amount of risk disclosure in annual reports increases gradually over the nine-year period from 49 to 67 sentences. In contrast, the proportion of risk sentences slightly decreases from 5.8% to 5.68% during the period. These statistics suggest that ASEAN firms add more risk information in their annual reports over years but the increase may be diluted by other types of information. As an annual report contains both financial and non-financial information such as management structure, social responsibility, human resources, information is unevenly distributed, and risk information might be minimally increased over time. Future-related risk disclosure remains very low and does not change over time while risk information is disclosed with more quantifiable terms. The amount of both positive and negative risk information increases over the period but the gap between them maintains at approximately a two-fold difference. This leads to the prevailing negative net tone of risk disclosure across years.

**Table 6.3. Descriptive statistics of risk disclosure variables by year**

|  | Year 2009 (N=651)    |       |           |       |        | Year 2010 (N=683)    |       |           |       |        | Year 2011 (N=703)    |       |           |       |          | Year 2012 (N=728)    |       |           |       |        |
|--|----------------------|-------|-----------|-------|--------|----------------------|-------|-----------|-------|--------|----------------------|-------|-----------|-------|----------|----------------------|-------|-----------|-------|--------|
|  | Variable             | Mean  | Std. Dev. | Min   | Max    | Variable             | Mean  | Std. Dev. | Min   | Max    | Variable             | Mean  | Std. Dev. | Min   | Max      | Variable             | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count           | 49.63 | 52.83     | 3     | 628    | Risk_count           | 49.81 | 55.01     | 3     | 797    | Risk_count           | 50.51 | 49.54     | 4     | 427.2    | Risk_count           | 51.71 | 49.69     | 2     | 493    |
|  | Risk_percent         | 5.80% | 2.99%     | 0.71% | 39.63% | Risk_percent         | 5.75% | 3.06%     | 1.46% | 39.63% | Risk_percent         | 5.86% | 3.11%     | 0.84% | 39.63%   | Risk_percent         | 5.85% | 3.03%     | 0.90% | 39.63% |
|  | Riskforwlook_count   | 5.65  | 8.80      | 0     | 102    | Riskforwlook_count   | 6.42  | 11.20     | 0     | 112    | Riskforwlook_count   | 7.36  | 13.41     | 0     | 129      | Riskforwlook_count   | 8.80  | 22.21     | 0     | 255    |
|  | Riskforwlook_percent | 0.03% | 0.03%     | 0.00% | 0.43%  | Riskforwlook_percent | 0.03% | 0.03%     | 0.00% | 0.30%  | Riskforwlook_percent | 0.03% | 0.03%     | 0.00% | 0.22%    | Riskforwlook_percent | 0.04% | 0.22%     | 0.00% | 5.78%  |
|  | Riskquan_count       | 37.76 | 51.42     | 0     | 657    | Riskquan_count       | 38.26 | 54.75     | 0     | 657    | Riskquan_count       | 38.50 | 52.13     | 0     | 657      | Riskquan_count       | 39.65 | 52.38     | 0     | 657    |
|  | Riskquan_percent     | 0.49% | 1.70%     | 0.00% | 13.65% | Riskquan_percent     | 0.17% | 0.27%     | 0.00% | 4.43%  | Riskquan_percent     | 0.16% | 0.23%     | 0.00% | 3.79%    | Riskquan_percent     | 0.17% | 0.27%     | 0.00% | 4.43%  |
|  | Riskpositive_count   | 4.63  | 5.95      | 0     | 81     | Riskpositive_count   | 5.43  | 17.96     | 0     | 448    | Riskpositive_count   | 4.67  | 5.96      | 0     | 96.57143 | Riskpositive_count   | 4.83  | 5.13      | 0     | 39     |
|  | Riskpositive_percent | 0.03% | 0.03%     | 0.00% | 0.35%  | Riskpositive_percent | 0.03% | 0.03%     | 0.00% | 0.35%  | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.14%    | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.29%  |
|  | Risknegative_count   | 12.47 | 22.00     | 0     | 402    | Risknegative_count   | 12.51 | 21.95     | 0     | 448    | Risknegative_count   | 22.12 | 38.17     | 0     | 471      | Risknegative_count   | 13.06 | 17.79     | 0     | 226    |
|  | Risknegative_percent | 0.07% | 0.07%     | 0.00% | 0.61%  | Risknegative_percent | 0.07% | 0.06%     | 0.00% | 0.52%  | Risknegative_percent | 0.15% | 0.25%     | 0.00% | 1.41%    | Risknegative_percent | 0.07% | 0.06%     | 0.00% | 0.52%  |
|  | Risk_tone (N=628)    | -0.05 | 0.62      | -1    | 1      | Risk_tone (N=657)    | -0.35 | 0.44      | -1    | 1      | Risk_tone (N=682)    | -0.44 | 0.46      | -1    | 1        | Risk_tone (N=708)    | -0.36 | 0.42      | -1    | 1      |

**Table 6.3. Continued**

|                   | Variable             | Mean  | Std. Dev. | Min   | Max    |
|-------------------|----------------------|-------|-----------|-------|--------|
| Year 2017 (N=759) | Risk_count           | 67.09 | 55.15     | 1     | 456    |
|                   | Risk_percent         | 5.62% | 2.80%     | 0.60% | 39.63% |
|                   | Riskforwlook_count   | 6.59  | 8.16      | 0     | 115    |
|                   | Riskforwlook_percent | 0.02% | 0.02%     | 0.00% | 0.19%  |
|                   | Riskquan_count       | 50.47 | 60.90     | 0     | 609    |
|                   | Riskquan_percent     | 0.15% | 0.25%     | 0.00% | 4.43%  |
|                   | Riskpositive_count   | 7.00  | 6.82      | 0     | 58     |
|                   | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.13%  |
|                   | Risknegative_count   | 18.86 | 21.20     | 0     | 152    |
|                   | Risknegative_percent | 0.08% | 0.06%     | 0.00% | 0.52%  |
|                   | Risk_tone (N=750)    | -0.38 | 0.38      | -1    | 1      |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Riskforwlook\_count/Riskforwlook\_percent* is the count/percentage of forward-looking words in risk-related sentences; *Riskquan\_count/Riskquan\_percent* is the count/percentage of quantitative words in risk-related sentences; *Riskpositive\_count/Riskpositive\_percent* is the count/percentage of positive words in risk-related sentences; *Risknegative\_count/Risknegative\_percent* is the count/percentage of negative words in risk-related sentences respectively; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences.



Finally, descriptive statistics of risk disclosure variables by industry is summarised in Table 6.4. While the highest count of risk sentences is provided by firms in Communications and Utilities sectors in their annual reports, risk disclosure levels in the other industries are not noticeably different. This finding indicates that firms in Communications and Utilities industries are associated with higher risks by nature so they have incentives to explain more about their risk exposure and risk management. Meanwhile, risk disclosure in Technologies industry is the lowest, both in absolute and relative terms, as firms in this industry possibly suffer higher disclosure-related costs such as proprietary and litigation costs. These results support the findings for forward-looking disclosure discussed in Section 5.2.1 of Chapter 5, altogether suggesting that the industry nature affects ASEAN firms' disclosure of forward-looking and risk information. The findings are also consistent with Campbell et al. (2014) that risk disclosure is high in communications firms while being low in technological firms. These differences are not notable when risk disclosure is measured in relative terms. In all industries, risk information is provided with quantitative measures than forward-looking risk information and the tone of risk disclosure is more inclined to pessimistic. This finding is consistent with the descriptive statistics for the whole sample in Table 6.1 and reveals that ASEAN firms' annual reports mainly contain information about past risks regardless of the industry.

**Table 6.4. Descriptive statistics of risk disclosure variables by industry**

|  | Communications (N=327)           |       |           |       |        | Healthcare (N=211)    |       |           |       |        |
|--|----------------------------------|-------|-----------|-------|--------|-----------------------|-------|-----------|-------|--------|
|  | Variable                         | Mean  | Std. Dev. | Min   | Max    | Variable              | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count                       | 103   | 100       | 6     | 797    | Risk_count            | 59    | 48        | 6     | 335    |
|  | Risk_percent                     | 5.70% | 3.36%     | 1.25% | 22.84% | Risk_percent          | 5.73% | 2.71%     | 1.21% | 14.78% |
|  | Riskforwlook_count               | 11    | 21        | 0     | 255    | Riskforwlook_count    | 7     | 14        | 0     | 107    |
|  | Riskforwlook_percent             | 0.02% | 0.02%     | 0.00% | 0.22%  | Riskforwlook_percent  | 0.02% | 0.02%     | 0.00% | 0.10%  |
|  | Riskquan_count                   | 79    | 137       | 0     | 705    | Riskquan_count        | 49    | 49        | 0     | 281    |
|  | Riskquan_percent                 | 0.17% | 0.44%     | 0.00% | 6.84%  | Riskquan_percent      | 0.26% | 0.83%     | 0.00% | 9.43%  |
|  | Riskpositive_count               | 12    | 27        | 0     | 448    | Riskpositive_count    | 5     | 6         | 0     | 27     |
|  | Riskpositive_percent             | 0.03% | 0.02%     | 0.00% | 0.25%  | Riskpositive_percent  | 0.02% | 0.02%     | 0.00% | 0.10%  |
|  | Risknegative_count               | 35    | 52        | 0     | 448    | Risknegative_count    | 14    | 15        | 0     | 85     |
|  | Risknegative_percent             | 0.09% | 0.09%     | 0.00% | 0.88%  | Risknegative_percent  | 0.08% | 0.10%     | 0.00% | 1.11%  |
|  | risktone (N=323)                 | -0.39 | 0.38      | -1    | 1      | Risk_tone (N=201)     | -0.39 | 0.38      | -1    | 1      |
|  | Consumer discretionary (N=1,510) |       |           |       |        | Industrials (N=1,563) |       |           |       |        |
|  | Variable                         | Mean  | Std. Dev. | Min   | Max    | Variable              | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count                       | 51    | 39        | 1     | 292    | Risk_count            | 52    | 49        | 1     | 412    |
|  | Risk_percent                     | 5.73% | 2.50%     | 0.84% | 20.69% | Risk_percent          | 5.64% | 2.72%     | 0.60% | 19.28% |
|  | Riskforwlook_count               | 6     | 8         | 0     | 84     | Riskforwlook_count    | 7     | 14        | 0     | 255    |
|  | Riskforwlook_percent             | 0.03% | 0.03%     | 0.00% | 0.36%  | Riskforwlook_percent  | 0.03% | 0.08%     | 0.00% | 2.85%  |
|  | Riskquan_count                   | 45    | 50        | 0     | 344    | Riskquan_count        | 39    | 49        | 0     | 544    |
|  | Riskquan_percent                 | 0.19% | 0.56%     | 0.00% | 13.65% | Riskquan_percent      | 0.19% | 0.64%     | 0.00% | 13.05% |
|  | Riskpositive_count               | 5     | 5         | 0     | 60     | Riskpositive_count    | 5     | 6         | 0     | 41     |
|  | Riskpositive_percent             | 0.03% | 0.02%     | 0.00% | 0.13%  | Riskpositive_percent  | 0.03% | 0.03%     | 0.00% | 0.35%  |
|  | Risknegative_count               | 14    | 17        | 0     | 194    | Risknegative_count    | 15    | 20        | 0     | 160    |
|  | Risknegative_percent             | 0.09% | 0.10%     | 0.00% | 1.25%  | Risknegative_percent  | 0.09% | 0.10%     | 0.00% | 1.41%  |
|  | Risk_tone (N=1,480)              | -0.39 | 0.39      | -1    | 1      | Risk_tone (N=1,525)   | -0.38 | 0.42      | -1    | 1      |
|  | Consumer staples (N=867)         |       |           |       |        | Materials (N=968)     |       |           |       |        |
|  | Variable                         | Mean  | Std. Dev. | Min   | Max    | Variable              | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count                       | 62    | 41        | 6     | 216    | Risk_count            | 54    | 64        | 4     | 565    |
|  | Risk_percent                     | 5.86% | 2.78%     | 1.22% | 19.32% | Risk_percent          | 5.84% | 4.03%     | 0.99% | 39.63% |
|  | Riskforwlook_count               | 7     | 8         | 0     | 67     | Riskforwlook_count    | 7     | 15        | 0     | 160    |
|  | Riskforwlook_percent             | 0.03% | 0.02%     | 0.00% | 0.15%  | Riskforwlook_percent  | 0.03% | 0.03%     | 0.00% | 0.21%  |
|  | Riskquan_count                   | 40    | 42        | 0     | 383    | Riskquan_count        | 38    | 47        | 0     | 561    |
|  | Riskquan_percent                 | 0.17% | 0.62%     | 0.00% | 11.97% | Riskquan_percent      | 0.17% | 0.37%     | 0.00% | 3.79%  |
|  | Riskpositive_count               | 6     | 6         | 0     | 49     | Riskpositive_count    | 5     | 7         | 0     | 82     |
|  | Riskpositive_percent             | 0.03% | 0.02%     | 0.00% | 0.12%  | Riskpositive_percent  | 0.03% | 0.03%     | 0.00% | 0.15%  |
|  | Risknegative_count               | 16    | 25        | 0     | 471    | Risknegative_count    | 15    | 21        | 0     | 159    |
|  | Risknegative_percent             | 0.07% | 0.11%     | 0.00% | 1.32%  | Risknegative_percent  | 0.09% | 0.11%     | 0.00% | 1.04%  |
|  | Risk_tone (N=847)                | -0.34 | 0.41      | -1    | 1      | Risk_tone (N=949)     | -0.39 | 0.43      | -1    | 1      |
|  | Energy (N=422)                   |       |           |       |        | Technologies (N=562)  |       |           |       |        |
|  | Variable                         | Mean  | Std. Dev. | Min   | Max    | Variable              | Mean  | Std. Dev. | Min   | Max    |
|  | Risk_count                       | 67    | 54        | 2     | 315    | Risk_count            | 33    | 24        | 2     | 145    |
|  | Risk_percent                     | 5.65% | 2.55%     | 0.90% | 15.77% | Risk_percent          | 5.30% | 2.57%     | 0.73% | 18.26% |
|  | Riskforwlook_count               | 9     | 17        | 0     | 203    | Riskforwlook_count    | 3     | 4         | 0     | 32     |
|  | Riskforwlook_percent             | 0.04% | 0.28%     | 0.00% | 5.78%  | Riskforwlook_percent  | 0.02% | 0.02%     | 0.00% | 0.27%  |
|  | Riskquan_count                   | 49    | 51        | 0     | 327    | Riskquan_count        | 24    | 30        | 0     | 190    |
|  | Riskquan_percent                 | 0.20% | 0.71%     | 0.00% | 10.19% | Riskquan_percent      | 0.19% | 0.57%     | 0.00% | 8.40%  |
|  | Riskpositive_count               | 7     | 7         | 0     | 45     | Riskpositive_count    | 4     | 3         | 0     | 18     |
|  | Riskpositive_percent             | 0.03% | 0.02%     | 0.00% | 0.20%  | Riskpositive_percent  | 0.03% | 0.02%     | 0.00% | 0.14%  |
|  | Risknegative_count               | 18    | 26        | 0     | 366    | Risknegative_count    | 12    | 16        | 0     | 136    |
|  | Risknegative_percent             | 0.08% | 0.11%     | 0.00% | 1.31%  | Risknegative_percent  | 0.09% | 0.13%     | 0.00% | 1.26%  |
|  | Risk_tone (N=415)                | -0.35 | 0.44      | -1    | 1      | Risk_tone (N=544)     | -0.37 | 0.44      | -1    | 1      |

**Table 6.4. Continued**

|                   | Variable             | Mean  | Std. Dev. | Min   | Max    |
|-------------------|----------------------|-------|-----------|-------|--------|
| Utilities (N=130) | Risk_count           | 96    | 62        | 3     | 277    |
|                   | Risk_percent         | 6.04% | 3.32%     | 0.84% | 27.09% |
|                   | Riskforwlook_count   | 7     | 6         | 0     | 33     |
|                   | Riskforwlook_percent | 0.02% | 0.02%     | 0.00% | 0.11%  |
|                   | Riskquan_count       | 71    | 78        | 0     | 429    |
|                   | Riskquan_percent     | 0.28% | 1.04%     | 0.00% | 10.43% |
|                   | Riskpositive_count   | 10    | 8         | 0     | 40     |
|                   | Riskpositive_percent | 0.03% | 0.02%     | 0.00% | 0.08%  |
|                   | Risknegative_count   | 26    | 24        | 0     | 108    |
|                   | Risknegative_percent | 0.08% | 0.05%     | 0.00% | 0.21%  |
|                   | Risk_tone (N=125)    | -0.38 | 0.31      | -1    | 1      |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Riskforwlook\_count/Riskforwlook\_percent* is the count/percentage of forward-looking words in risk-related sentences; *Riskquan\_count/Riskquan\_percent* is the count/percentage of quantitative words in risk-related sentences; *Riskpositive\_count/Riskpositive\_percent* is the count/percentage of positive words in risk-related sentences; *Risknegative\_count/Risknegative\_percent* is the count/percentage of negative words in risk-related sentences respectively; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences.

### 6.3. Bivariate analysis

In this section, a Pearson correlation matrix is presented to show possible association between ownership structure and risk disclosure as well as the relevance of control variables to risk disclosure. Table 6.5 indicates that all risk disclosure variables are correlated with a majority of independent variables. Managerial and government ownership are correlated with almost all risk disclosure variables at the 1% level but the directions of correlation are opposite. While the coefficients for government ownership are largest and all positive, ranging between 0.04 and 0.28, those for managerial ownership are lowest and all negative, ranging between -0.18 and -0.02. Institutional ownership is positively correlated with all risk disclosure variables at the 1% level except the negative tone. The correlation between foreign ownership and risk disclosure are only significantly correlated with the overall level of risk disclosure, forward-looking and quantitative risk information while the coefficients for the tone variables are insignificant. For the relative measures of risk disclosure, Table 6.6 shows that the correlation between ownership and risk disclosure variables is generally less significant. Collectively, the bivariate analysis suggests possible statistical association between ownership structure and risk disclosure but regression results in the multivariate regression will help to arrive at a definite conclusion. All control variables are correlated with risk disclosure variables, except firm growth, implying that the inclusion of such variables help to explain the level of risk disclosure among ASEAN firms.

**Table 6.5. Pearson correlation matrix between all independent variables and risk disclosure variables as measured in absolute terms**

|                        | Risk_count | Riskforlook_count | Riskquan_count | Riskpositive_count | Risknegative_count | Risk_tone |
|------------------------|------------|-------------------|----------------|--------------------|--------------------|-----------|
| Lagged Institution_own | 0.2**      | 0.15**            | 0.07**         | 0.1**              | 0.02               | 0.08**    |
| Lagged Foreign_own     | 0.07**     | 0.05**            | 0.03*          | 0.004              | -0.01              | 0.02      |
| Lagged Manager_own     | -0.18**    | -0.19**           | -0.08**        | -0.06**            | -0.04**            | -0.02     |
| Lagged Government_own  | 0.28**     | 0.24**            | 0.14**         | 0.21**             | 0.14**             | 0.04**    |
| Firmsize               | 0.26**     | 0.18**            | 0.17**         | 0.21**             | 0.14**             | 0.1**     |
| Growth                 | 0.003      | 0.02              | 0.01           | -0.02              | -0.02              | 0.03*     |
| Leverage               | 0.15**     | 0.1**             | 0.12**         | 0.06**             | 0.08**             | 0.04**    |
| Liquidity              | -0.14**    | -0.09**           | -0.09**        | -0.09**            | -0.08**            | 0.007     |
| Profitability          | 0.11**     | 0.05**            | 0.04**         | 0.05**             | 0.001              | 0.07**    |
| Boardsize              | 0.27**     | 0.05**            | 0.22**         | 0.34**             | 0.34**             | 0.02      |
| Auditor                | 0.12**     | 0.07**            | 0.03*          | 0.11**             | 0.09**             | 0.06      |
| Independence           | -0.19**    | -0.19**           | -0.24**        | 0.02               | 0.03*              | 0.02      |
| Reportsize             | 0.79**     | 0.52**            | 0.54**         | 0.65**             | 0.59**             | 0.07**    |

Note: *Risk\_count* is the count of risk-related sentences in the annual report; *Riskforlook\_count/Riskquan\_count* is the count of forward-looking/quantitative words in risk-related sentences; *Riskpositive\_count/Risknegative\_count* is the count of positive/negative words in risk-related sentences; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* denotes 1% significance level, \* denotes 5% significance level.

**Table 6.6. Pearson correlation matrix between all independent variables and risk disclosure variables as measured in relative terms**

|                        | Risk_percent | Riskforlook_percent | Riskquan_percent | Riskpositive_percent | Risknegative_percent |
|------------------------|--------------|---------------------|------------------|----------------------|----------------------|
| Lagged Institution_own | -0.06**      | -0.02               | -0.098**         | -0.08**              | -0.14**              |
| Lagged Foreign_own     | 0.007        | -0.002              | -0.02            | -0.07**              | -0.03*               |
| Lagged Manager_own     | 0.08**       | 0.04**              | 0.04**           | 0.09**               | 0.08**               |
| Lagged Government_own  | -0.06**      | 0.04**              | -0.07**          | -0.04**              | -0.06**              |
| Firmsize               | 0.13**       | 0.006               | 0.01             | -0.04**              | -0.08**              |
| Growth                 | 0.02         | 0.01                | 0.01             | -0.005               | 0                    |
| Liquidity              | -0.02        | -0.006              | -0.02            | 0.007                | 0.003                |
| Leverage               | 0.04**       | -0.002              | 0.004            | -0.003               | 0.004                |
| Profitability          | -0.06**      | -0.05**             | -0.02            | -0.05**              | -0.05**              |
| Auditor                | 0.03*        | -0.02               | -0.02            | -0.03*               | -0.02                |
| Boardsize              | 0.16**       | -0.04**             | 0.1**            | 0.1**                | 0.08**               |
| Independence           | 0.03*        | -0.02               | -0.05**          | 0.17**               | 0.11**               |

Notes: *Risk\_percent* is the percentage of risk-related sentences in the annual report; *Riskforlook\_percent/Riskquan\_percent* is the percentage of forward-looking/quantitative words in risk-related sentences; *Riskpositive\_percent/Risknegative\_percent* is the percentage of positive/negative words in risk-related sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* denotes 1% significance level, \* denotes 5% significance level.

## **6.4. Multivariate analysis**

### **6.4.1. The impact of ownership structure on risk disclosure in annual reports of ASEAN listed firms**

#### **6.4.1.1. The impact of ownership structure on the overall level of risk disclosure**

Regression results indicate that ownership structure significantly explains the absolute level of risk information in ASEAN firms' annual reports. Table 6.7 reveals significant non-linear associations between foreign, managerial, government ownership and risk disclosure. Meanwhile, there is a linear, positive and weak association between institutional ownership and risk disclosure. When risk disclosure is measured by the percentage of risk-related sentences in annual reports (Table 6.8), the only significant result is the non-linearity between managerial ownership and risk disclosure. This means ownership is more likely to influence the number of risk-related sentences in ASEAN firms' annual reports but does not affect the proportion of such sentences in the whole annual report. The dominance of the non-linear relationship implies that there is a level of ownership at which risk information reaches its maximum (or minimum). The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

#### *Institutional ownership*

Table 6.7 shows that institutional ownership has a positive impact on the count of risk-related sentences at the 10% level (coefficient = 0.047,  $t = 1.65$ ). This means the more shares held by institutions, the more risk information is disclosed by ASEAN listed firms. However, this association does not exist when disclosure is measured in relative terms (Table 6.8). The coefficients for the squared term of institutional ownership are negative but insignificant. Although the linear association is weak, it provides evidence that institutional shareholders strengthen the monitoring of management in ASEAN firms and subsequently enhance the

level of risk disclosure in annual reports. This finding supports the predictions of agency theory and stakeholder theory that institutional ownership narrows the information gap between managers and shareholders. Given the U-shaped association between institutional ownership and forward-looking disclosure, this result reveals institutional shareholders' preferences on the content of disclosure. Their positive effect on the disclosure of risk information is more straightforward as they might perceive risks as a crucial type of information in annual reports while their impact on forward-looking disclosure is more driven by their investment strategies. As a result, hypothesis 1b is accepted while hypothesis 1d is rejected.

As discussed in Section 2.4.4 of Chapter 2, institutional ownership is less common than foreign and government ownership in ASEAN countries but it still plays a key role in the economies. According to OECD (2018), the profile of institutional shareholders in ASEAN countries is featured by the strong presence of foreign institutions which have better knowledge and experience in risk management than domestic institutions and consequently encourage risk disclosure in their investee firms. Moreover, institutional ownership in the ASEAN region is largely attributed to insurance companies, venture capital funds (UNCTAD, 2018) and trust funds (Saleh et al., 2010a, b). OECD (2018) further reveals that institutional investment in ASEAN countries is mainly concentrated in technology, industrials, and consumer goods sectors. Compared to firms in other industries, technological firms are exposed to a more litigious information environment (Wang and Hussainey, 2013; Campbell et al., 2014). While risk disclosure is generally low in technological firms as discussed in Section 6.2, the presence of institutional shareholders pressure them to improve risk communication.

#### *Foreign ownership*

On the other hand, a negative coefficient of -0.275 ( $t = -2.03$ ) for the squared term of foreign ownership indicates that the effect of foreign ownership on risk disclosure can be explained by an inverted U shape. The association is positive at low levels of foreign ownership and turns negative when it exceeds a turning point. This result is consistent with the findings for forward-looking disclosure discussed



in Section 5.4.1.1 of Chapter 5. The positive impact can be explained that foreign investors, at low levels of shareholdings, have the incentive to favourably influence stock prices through public disclosures. These investors may originate from advanced economies such as the US, the UK and the EU and target the host ASEAN countries with developed stock markets such as Singapore and Malaysia (UNCTAD, 2021). This result partly supports agency theory which predicts that foreign investors have the incentive to bridge the information gap between themselves and local investors to reduce agency costs. Another possible explanation is that managers of foreign-owned firms are incentivised to employ risk disclosure to signal their risk management advantage over local firms, supporting the prediction of signalling theory. Increased disclosure also helps them avoid litigation costs when operating in an unfamiliar business environment. These findings support prior disclosure literature (Khanna et al., 2004; Barako et al., 2006; Huafang and Jianguo, 2007; Wang et al., 2008; Al-Akra et al., 2010; Liang et al., 2012; Khan et al., 2013; Liu, 2015; Rustam et al., 2019). Moreover, the participation of momentum and foreign institutional pressure-resistant investors in some ASEAN countries also have a positive impact on managers' propensity for risk disclosure, as discussed in French and Vishwakarma (2013) and Riaz et al. (2021). These investors are associated with a long-term investment horizon and fewer business ties which collectively impose stronger monitoring on managers.

However, the positive effect of foreign ownership only exists up to a certain level of shareholding. The extent of risk information decreases when foreign ownership becomes large. This negative effect demonstrates that influential shareholdings make foreign owners less reliant on public disclosures (Makhija and Patton, 2004). This finding is inconsistent with agency theory that diffused ownership is associated with greater information asymmetry. Large foreign shareholdings in ASEAN member countries can be traced to investors from other Asian emerging economies including the intra-regional counterparts such as Singapore and Malaysia. The familiarity with business protocols and investment cultures may reduce these investors' incentives for risk disclosure in annual reports. The growth of cross-border M&A in the region is another cause of large foreign ownership in

few listed companies. Foreign acquirers aim at cheap production costs and low tax expenses in the ASEAN markets while focusing less on long-term management (Garanina and Array, 2021). It is found in Liew et al. (2018) that foreign investors in Malaysia exploit their advantage of processing public news and their superior access to private firm-specific information in trading stocks and consequently exacerbate information asymmetry. Those with close business ties also lack motivation in monitoring managers because doing so would deteriorate their economic benefits, as found in Indonesia, Singapore and Malaysia (Riaz et al., 2021). Collectively, the above discussion supports hypothesis 2d while rejecting hypothesis 2b.

### *Managerial ownership*

At the 5% level, a positive coefficient of 0.685 ( $t = 2.36$ ) suggests that managerial ownership has a U-shaped relationship with risk disclosure. The association is weaker at the 10% level when risk disclosure is measured in relative terms (coefficient = 0.031,  $t = 1.84$ ). The U-shaped association can be interpreted that managerial ownership negatively influences risk disclosure at low levels of ownership but the effect turns positive when their shareholding exceeds a turning point. Managers have incentives for risk disclosure when their shareholdings are large enough as their earnings are affected by share price movements to a larger extent. This result partly supports prior studies (Eng and Mak, 2003; Gul and Leung, 2004; Elshandidy et al., 2013; Khan et al., 2013; Haddad et al., 2015; Liu, 2015; Habtoor et al., 2019; Salem et al., 2019) that managers tend to entrench in their disclosure decisions, but this negative effect is not persistent in this study. At high levels of managerial ownership, this result provides consistent evidence with prior studies in ASEAN countries that managerial ownership improves the concord between managers' interests and shareholders' interests (Soebyakto et al., 2018; Vu et al., 2018). The U-shaped association represents the combination of the entrenchment and alignment effects of managerial ownership on ASEAN firms' risk disclosure. This study, therefore, supports the predictions of agency and signalling theories in explaining risk disclosure in ASEAN listed firms; hence, supports a multi-theoretical perspective in explaining corporate risk disclosure, as discussed

in Ntim et al. (2013), Salem et al. (2019) and Habtoor et al. (2019). As a result, hypothesis 3d is accepted whereas hypothesis 3b is rejected.

Considering the insignificant effect of managerial ownership on forward-looking disclosure in Chapter 5, this result implies that managers prefer disclosing risk information to future-related information when they hold shares in the company. As discussed in Elshandidy et al. (2013) and Soebyakto et al. (2018), managers may be motivated to explain how different risk factors affect the business and thereby signal their competence in risk management. Meanwhile, they pay less attention to forward-looking disclosure to avoid adverse consequences of forecast inaccuracy. This is consistent with other studies which report no significant association between managerial ownership and forward-looking disclosure (Baginski et al., 2004; Liu, 2015; Alqatamin et al., 2017; Hassanein et al. 2019).

#### *Government ownership*

The non-linear relationship between government ownership and risk disclosure is significant but weak at the 10% level (coefficient = 0.643,  $t = 1.95$ ), indicating a U-shaped association. At low levels of government ownership, firms are less likely to disclose risk information. They exhibit greater risk disclosure when government ownership exceeds a turning point. This result reflects different roles played by ASEAN governments in the corporate information environment.

As discussed in Section 2.4.2 of Chapter 2, SOEs play an important role in developing ASEAN economies in early years of independence. Although a large number of SOEs have been privatised, the government still holds a large share in ASEAN listed companies (OECD, 2018). In low-income countries such as Indonesia, Philippines and Vietnam, firms with government ownership are commonly associated with poor transparency as post-privatised firms are still heavily controlled by the government (Astami et al., 2010; OECD, 2018; Choi et al., 2020; Tu and Nguyen, 2021). It is also notable that the governments of Singapore and Malaysia hold a large share in Indonesian firms as the result of their offshore investments in sovereign wealth funds (Carney and Hamilton-hard, 2015). Through these funds, the government aims at balancing their foreign

exchange reserves rather than seeking stock returns so disclosure is less of their interest. Furthermore, UNCTAD (2018, p.94) reports that some MNEs in telecommunications and energy sectors are linked to foreign governments. In such firms, the conflict between socio-economic objectives and the profit-making goal might be severe, leading to poor transparency. This result is consistent with some previous studies in developing economies such as Bopkin and Isshaq (2009) and Saggarr and Singh (2017).

On the other hand, in richer ASEAN countries, namely Singapore and Malaysia, the government plays a more active entrepreneurial role by supporting rather than controlling firms in core business sectors (Ang and Ding, 2006; Ismail and Sinnadurai, 2012). Large government shareholdings in these two countries increase pressure on firms to pursue transparency to legitimize their activities. This finding is in line with prior studies which suggest that firms with high state ownership are more likely to support the government's efforts on enhancing corporate governance and consequently maintain their continued access to the government's resources (Ntim et al., 2013; Allini et al., 2016; Habtoor et al., 2019). The result also provides supporting evidence to previous disclosure studies in countries with high government ownership such as Jordan (Alhazaimah et al., 2014; Haddad et al., 2015) and China (Meng et al., 2012; Hu et al., 2017). The positive effect of government ownership, conditioned by the level of shareholding, therefore confirms the view of capital need theory, legitimacy theory and stakeholder theory. As a result, hypothesis 4d is accepted and hypothesis 4b is rejected.

Compared to the negative impact of government ownership on forward-looking disclosure discussed in Section 5.4.1.1 of Chapter 5, the U-shaped effect in this chapter suggests that ASEAN governments have more incentives for risk disclosure. While forward-looking information is mainly provided on a voluntary basis, risk disclosure is more subject to regulations in ASEAN countries. As discussed in Section 2.5.4 of Chapter 2, while the focus of risk disclosure regulations is mainly on financial risk management after the Asian Financial Crisis 1997/1998, ASEAN countries have recently upgraded their Code of Corporate

Governance to strengthen the importance of non-financial risk communication. The ASEAN governments' efforts in developing risk disclosure regulations may be the reason behind the positive effect of government ownership on risk disclosure at high levels of shareholdings. Being a powerful and legitimate stakeholder, government owners are likely to earn immediate managers' responses to address their concerns, as discussed in Hu et al. (2017).

Among control variables, all firm characteristics are significant in explaining risk disclosure among ASEAN firms, except firm size, while no corporate governance factor has an impact on risk disclosure. Financial leverage is strongly positively associated with risk disclosure at the 1% level, meaning that firms are more likely to disseminate risk information when they employ more debts. This is consistent with Elgammal et al. (2018) that highly geared firms have incentives to clarify their position and reassure investors of their risk management approaches. The positive effect of sales growth on risk disclosure at the 10% level is consistent with previous studies in Hong Kong (Gul and Leung, 2004) and China (Cheng and Courtenay, 2015) but inconsistent with empirical results in the UK (Elshandidy et al., 2015). This finding suggests that growing firms have incentives to communicate risk information to convince investors that they are not overvalued. By sharing more risk information, liquid and profitable firms also send signals about their good performance. Moreover, profitable firms are associated with high analyst followings so increased risk disclosure may help their stocks being more accurately priced (Elgammal et al., 2018). Considering the insignificant results for control variables in Chapter 5, these findings suggest that company characteristics influence risk disclosure to a greater extent than forward-looking disclosure. These results, in addition, strongly support signalling theory in explaining firms' incentives for disclosure.

Consistent with the findings in Chapter 5, the size of annual report is strongly and positively associated with risk disclosure. This means firms communicate more risk information in longer reports and vice versa. Meanwhile, the results for corporate governance factors are insignificant. This is consistent with the findings in Chapter 5 and those reported in previous studies (Allini et al., 2016; Saggat and Singh.,

2017; Elshandidy et al., 2019; Salem et al., 2019). It can be explained that weak governance systems do not effectively encourage firms to share more value-relevant information. For example, Saggar and Singh (2017) indicate that independent directors do not have sufficient expertise and knowledge to influence corporate decision-making in developing economies. Due to informal arrangements, they may represent the interests of block shareholders rather than stakeholders' interests; hence, have low incentives for public disclosure (Ganguli and Guha Deb, 2021).

**Table 6.7. The impact of ownership structure on the count of risk-related sentences in ASEAN firms' annual reports**

| Dependent variable: Risk_count<br>Independent variables | Hypothesis | Expected sign | Linear   |        | Non-linear |        |
|---|------------|---------------|----------|--------|------------|--------|
|   |            |               | Coeff.   | t-stat | Coeff.     | t-stat |
| Constant  |            |               | -4.908   | -15.26 | -4.845     | -15.09 |
| <b>Ownership</b>  |            |               |          |        |            |        |
| Lagged Institution_own                                  | 1b         | +             | 0.047*   | 1.65   | 0.162*     | 1.86   |
| Lagged Foreign_own                                      | 2b         | +             | -0.017   | -0.36  | 0.221*     | 1.65   |
| Lagged Manager_own                                      | 3b         | -             | 0.031    | 0.4    | -0.365*    | -1.82  |
| Lagged Government_own                                   | 4b         | +             | -0.00002 | 0      | -0.556*    | -1.64  |
| <b>Squared ownership</b>                                |            |               |          |        |            |        |
| Lagged Squared Institution_own                          | 1d         | ?             |          |        | -0.153     | -1.47  |
| Lagged Squared Foreign_own                              | 2d         | ?             |          |        | -0.275**   | -2.03  |
| Lagged Squared Manager_own                              | 3d         | ?             |          |        | 0.685**    | 2.36   |
| Lagged Squared Government_own                           | 4d         | ?             |          |        | 0.643*     | 1.95   |
| <b>Company characteristics</b>                          |            |               |          |        |            |        |
| Firmsize  |            |               | 0.011    | 0.89   | 0.008      | 0.64   |
| Growth  |            |               | 0.028*   | 1.75   | 0.029*     | 1.8    |
| Liquidity   |            |               | 0.006*   | 1.73   | 0.006*     | 1.79   |
| Leverage  |            |               | 0.021*** | 2.67   | 0.022***   | 2.71   |
| Profitability   |            |               | 0.122    | 1.6    | 0.124*     | 1.64   |
| Reportsize  |            |               | 0.880*** | 26.3   | 0.876***   | 26.19  |
| <b>Corporate governance factors</b>                     |            |               |          |        |            |        |
| Auditor   |            |               | -0.042   | -1.17  | -0.039     | -1.1   |
| Boardsize   |            |               | -0.007   | -1.16  | -0.007     | -1.22  |
| Independence  |            |               | 0.032    | 0.39   | 0.015      | 0.18   |
| Adjusted R-squared                                      |            |               | 63.28%   |        | 64.60%     |        |
| Year and industry fixed effects                         |            |               | Yes      |        |            |        |
| Number of observations                                  |            |               | 5,006    |        |            |        |
| Number of firms   |            |               | 732      |        |            |        |

Notes: *Risk\_count* is the count of risk-related sentences in the annual report; *Institution\_own*/*Foreign\_own*/*Manager\_own*/*Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

**Table 6.8. The impact of ownership structure on the percentage of risk-related sentences in ASEAN firms' annual reports**

| Dependent variable:<br>Risk_percent | Hypothesis | Expected sign | Linear  |        | Non-linear |        |
|-------------------------------------|------------|---------------|---------|--------|------------|--------|
|                                     |            |               | Coeff.  | t-stat | Coeff.     | t-stat |
| Constant                            |            |               | 0.596   | 15.71  | 0.060      | 15.54  |
| <b>Ownership</b>                    |            |               |         |        |            |        |
| Lagged Institution_own              | 1b         | +             | 0.0003  | 0.16   | 0.005      | 0.95   |
| Lagged Foreign_own                  | 2b         | +             | -0.003  | -1.22  | 0.008      | 0.98   |
| Lagged Manager_own                  | 3b         | -             | 0.003   | 0.8    | -0.015     | -1.28  |
| Lagged Government_own               | 4b         | +             | 0.005   | 0.85   | -0.012     | -0.77  |
| <b>Squared ownership</b>            |            |               |         |        |            |        |
| Lagged Squared Institution_own      | 1d         | ?             |         |        | -0.006     | -1.02  |
| Lagged Squared Foreign_own          | 2d         | ?             |         |        | -0.013     | -1.56  |
| Lagged Squared Manager_own          | 3d         | ?             |         |        | 0.031*     | 1.84   |
| Lagged Squared Government_own       | 4d         | ?             |         |        | 0.020      | 1.31   |
| <b>Company characteristics</b>      |            |               |         |        |            |        |
| Firm size                           |            |               | 0.0009  | 1.2    | 0.0007     | 1.01   |
| Growth                              |            |               | 0.0007  | 0.63   | 0.0007     | 0.66   |
| Liquidity                           |            |               | 0.0009* | 1.69   | 0.0009*    | 1.73   |
| Leverage                            |            |               | 0.0004* | 1.79   | 0.0004*    | 1.82   |
| Profitability                       |            |               | 0.0009  | 0.18   | 0.001      | 0.22   |
| <b>Corporate governance factors</b> |            |               |         |        |            |        |
| Auditor                             |            |               | -0.004* | -1.85  | -0.004*    | -1.77  |
| Board size                          |            |               | -0.0004 | -1.22  | -0.0004    | -1.29  |
| Independence                        |            |               | -0.0003 | -0.08  | -0.001     | -0.27  |
| Adjusted R-squared                  |            |               | 0.93%   |        | 1.80%      |        |
| Year and industry fixed effects     | Yes        |               |         |        |            |        |
| Number of observations              | 5,006      |               |         |        |            |        |
| Number of firms                     | 732        |               |         |        |            |        |

Notes: *Risk\_percent* is the percentage of risk-related sentences in the annual report; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firm size* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Report size* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Board size* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.



#### **6.4.1.2. The impact of ownership structure on the time horizon and the quantification of risk disclosure**

The regression results are reported in Table 6.9 and Table 6.10 in which the two qualitative dimensions of risk disclosure are measured in absolute and relative terms respectively. The coefficients in Table 6.10 are multiplied by 10,000 to make it easier for interpretation. While the results for the absolute disclosure measures are insignificant, there are some significant results when disclosure is measured by the word percentage. This is inconsistent with the findings in Section 6.4.1.1 that ownership has a stronger effect on the absolute amount of risk information in annual reports and suggests that it only influences the quality of risk disclosure when the report size is considered. Table 6.10 indicates that institutional ownership is negatively associated with the extent of forward-looking risk information in ASEAN firms' annual reports at the 1% level (coefficient = -0.759,  $t = -2.94$ ) and negatively associated with the extent of quantitative risk information at the 10% level (coefficient = -1.87,  $t = -1.78$ ). In addition, a positive association exists between managerial ownership and the future orientation of risk disclosure (coefficient = 1.268,  $t = 1.88$ ). There is no indication of the non-linearity between ownership and qualitative characteristics of risk disclosure.

The negative association may imply information preferences of short-term institutional investors in ASEAN countries who are strongly driven by stock price movements. This type of shareholder attempts to gain immediate positive market reactions to disclosure but simultaneously avoid excessive information costs. In such costs, proprietary cost is related to the loss of competitive advantage due to sharing company-specific risk information while litigation cost can be attributed to the threat of post-disclosure stakeholder litigations due to forecast inaccuracy (Jia et al., 2019). Linsley and Shrivess (2006) explain that firms face difficulties in quantifying risks due to the lack of data and risk measurement techniques and therefore their risk estimates are likely to deviate from the eventual risk outcomes. To avoid potential legal claims on risk estimation errors by decision-makers, institutional owners may prefer their investee firms providing more non-time

specific and qualitative to forward-looking and quantitative risk information, as discussed in Beretta and Bozzolan (2004).

While institutional ownership has been found to positively affect the overall level of risk disclosure in Section 6.4.1.1, its effects on the two dimensions of risk disclosure are both negative. These results suggest that the increased risk disclosure induced by institutional shareholders in ASEAN listed firms contains limited forward-looking and quantitative information. As non-disclosure may be interpreted by investors as a lack of transparency (Jia et al., 2019), institutional shareholders in ASEAN firms attempt to induce their firms to disclose more risk information which is, nevertheless, not accompanied with better quality.

Although the positive association between managerial ownership and forward-looking risk disclosure is weak, it does suggest that the impact of managerial ownership has some statistical significance. However, the relationship does not exist when forward-looking risk information is measured by the word count. Managers are more likely to provide future risk information when their ownership increases. As opposed to institutional shareholders, managers may perceive that the benefits outweigh the costs associated with forecasting risks. They have incentives to signal their risk management competence to distinguish themselves from other industrial peers. Moreover, they may be willing to share value-relevant risk information to reduce monitoring costs imposed by shareholders. The insignificant impact of managerial ownership on the level of quantitative risk information meanwhile indicates that managers may be restrained by the costs of measuring risks. These findings are in line with the predictions of agency theory (Jensen and Meckling, 1976; Watson et al., 2002) and signalling theory (Trueman, 1986; Campbell et al., 2001). Empirically, these results are however inconsistent with the majority of prior studies (Eng and Mak, 2003; Gul and Leung, 2004; Akhtaruddin and Haron, 2010; Broberg et al., 2010; Khan et al., 2013; Wang and Hussainey, 2013; Haddad et al., 2015; Hassanein and Hussainey, 2015; Beekes et al., 2016) but consistent with few studies in ASEAN countries such as Indonesia (Agustia et al., 2018; Soebyakto et al., 2018), Thailand (Farooque et al., 2020) and

Vietnam (Vu et al., 2018). This finding is in line with the rejection of hypothesis 3b in Section 6.4.1.1.

As discussed in Section 6.2, forward-looking risk information is very limited and has changed little over the study period while the availability of quantitative risk information is greater among ASEAN firms. This difference is, however, not relevant to ownership. Insignificant and weak associations suggest that ownership identities do not play a role in improving risk disclosure quality in ASEAN countries. Shareholders of ASEAN firms might be sensitive to the costs of risk disclosure so they are cautious in their influence on the specificity of risk information in annual reports.

Among control variables, firm size is positively associated with quantitative risk information while forward-looking risk information is statistically dependent on sales growth. These results are consistent with previous studies which indicate that large firms are more likely to afford the costs of measuring risks and they have incentives to signal that advantage to the market (Beretta and Bozzolan, 2004; Linsley and Shrive, 2006; Elshandidy et al., 2015; Elshandidy et al., 2019). Meanwhile, growing firms are incentivized to discuss more about future risks to explain their growth prospects and reassure investors of their potential. This finding agrees with Elshandidy et al. (2018) that growing firms increase both quantity and quality of risk disclosure in exchange for enhanced access to external finance at lower costs. However, firms with a Big-4 auditor do not exhibit greater future-related risk information as expected, suggesting that the presence of a Big4 auditor substitutes the need for risk disclosure among ASEAN firms. In firms with a non-Big4 auditor, managers have more incentives to improve the disclosure quality to reduce non-compliance costs and investor uncertainties. This finding is consistent with Campbell et al. (2014) and Elshandidy and Neri (2015).

**Table 6.9. The impact of ownership structure on the time horizon and quantification of risk disclosure as measured by the count of words**

| Dependent variable                  | Riskforwlook_count |        |          |        | Riskquan_count |        |          |        |
|-------------------------------------|--------------------|--------|----------|--------|----------------|--------|----------|--------|
|                                     | Coeff.             | t-stat | Coeff.   | t-stat | Coeff.         | t-stat | Coeff.   | t-stat |
| Constant                            | -3.491             | -6.39  | -3.491   | -6.38  | -4.682         | -8.92  | -4.625   | -8.75  |
| <b>Ownership</b>                    |                    |        |          |        |                |        |          |        |
| Lagged Institution_own              | -0.097             | -1.24  | -0.131   | -0.60  | 0.009          | 0.17   | 0.101    | 0.55   |
| Lagged Foreign_own                  | -0.009             | -0.07  | 0.226    | 0.65   | -0.030         | -0.26  | 0.045    | 0.15   |
| Lagged Manager_own                  | 0.126              | 0.87   | 0.287    | 0.72   | 0.065          | 0.39   | -0.114   | -0.25  |
| Lagged Government_own               | -0.342             | -1.31  | -0.322   | -0.56  | 0.242          | 1.27   | -0.428   | -0.80  |
| <b>Squared ownership</b>            |                    |        |          |        |                |        |          |        |
| Lagged squared Institution_own      |                    |        | 0.034    | 0.12   |                |        | -0.119   | -0.50  |
| Lagged squared Foreign_own          |                    |        | -0.268   | -0.68  |                |        | -0.087   | -0.26  |
| Lagged squared Manager_own          |                    |        | -0.274   | -0.45  |                |        | 0.311    | 0.46   |
| Lagged squared Government_own       |                    |        | -0.014   | -0.02  |                |        | 0.765    | 1.47   |
| <b>Company characteristics</b>      |                    |        |          |        |                |        |          |        |
| Firmsize                            | -0.001             | -0.04  | -0.003   | -0.09  | 0.06**         | 2.33   | 0.059**  | 2.25   |
| Growth                              | 0.057*             | 1.72   | 0.058*   | 1.73   | 0.026          | 0.84   | 0.027    | 0.87   |
| Liquidity                           | 0.008              | 0.8    | 0.008    | 0.81   | 0.007          | 0.84   | 0.007    | 0.83   |
| Leverage                            | 0.025              | 1.37   | 0.025    | 1.38   | 0.026          | 1.49   | 0.026    | 1.48   |
| Profitability                       | -0.026             | -0.15  | -0.025   | -0.15  | 0.271*         | 1.84   | 0.268*   | 1.82   |
| Reportsize                          | 0.513***           | 9.47   | 0.512*** | 9.45   | 0.795***       | 14.72  | 0.791*** | 14.56  |
| <b>Corporate governance factors</b> |                    |        |          |        |                |        |          |        |
| Auditor                             | -0.021             | -0.25  | -0.021   | -0.25  | -0.089         | -1.29  | -0.088   | -1.28  |
| Boardsize                           | 0.0002             | 0.02   | -0.001   | -0.07  | -0.011         | -0.92  | -0.011   | -0.92  |
| Independence                        | 0.049              | 0.28   | 0.043    | 0.24   | 0.163          | 1.01   | 0.151    | 0.94   |
| Adjusted R-squared                  | 22.39%             |        | 22.09%   |        | 26.98%         |        | 28.85%   |        |
| Year and industry fixed effects     | Yes                |        |          |        |                |        |          |        |
| Number of observations              | 5,006              |        |          |        |                |        |          |        |
| Number of firms                     | 732                |        |          |        |                |        |          |        |

Notes: *Riskforwlook\_count/Riskquan\_count* is the count of forward-looking/quantitative words in risk-related sentences respectively; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* \*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

**Table 6.10. The impact of ownership structure on the time horizon and quantification of risk disclosure as measured by the percentage of words**

| Dependent variable                  | Riskforlook_percent   |       |        |        | Riskquan_percent |        |         |        |
|-------------------------------------|-----------------------|-------|--------|--------|------------------|--------|---------|--------|
|                                     | Independent variables |       | Coeff. | t-stat | Coeff.           | t-stat | Coeff.  | t-stat |
| Constant                            | 3.152                 | 5.62  | 3.142  | 5.58   | 17.924           | 9.38   | 18.38   | 8.95   |
| <b>Ownership</b>                    |                       |       |        |        |                  |        |         |        |
| Lagged Institution_own              | -0.759***             | -2.94 | -0.69  | -0.84  | -1.870*          | -1.78  | -3.967  | -0.96  |
| Lagged Foreign_own                  | -0.452                | -1.06 | -0.277 | -0.21  | -1.452           | -1.12  | 1.317   | 0.28   |
| Lagged Manager_own                  | 1.268*                | 1.88  | 1.216  | 0.75   | -0.609           | -0.21  | -9.208  | -1.19  |
| Lagged Government_own               | 0.049                 | 0.06  | 0.176  | 0.09   | 3.094            | 1.61   | 1.366   | 0.19   |
| <b>Squared ownership</b>            |                       |       |        |        |                  |        |         |        |
| Lagged squared Institution_own      |                       |       | -0.098 | -0.09  |                  |        | 2.818   | 0.56   |
| Lagged squared Foreign_own          |                       |       | -0.199 | -0.14  |                  |        | -3.315  | -0.71  |
| Lagged squared Manager_own          |                       |       | 0.093  | 0.03   |                  |        | 14.781  | 1.19   |
| Lagged squared Government_own       |                       |       | -0.131 | -0.06  |                  |        | 1.934   | 0.28   |
| <b>Company characteristics</b>      |                       |       |        |        |                  |        |         |        |
| Firmsize                            | 0.052                 | -0.5  | -0.054 | -0.52  | 0.688*           | 1.77   | 0.672*  | 1.7    |
| Growth                              | 0.175                 | 1.36  | 0.175  | 1.36   | -0.620           | -0.73  | -0.625  | -0.73  |
| Liquidity                           | 0.029                 | 0.86  | 0.03   | 0.86   | 0.014            | 0.12   | 0.019   | 0.16   |
| Leverage                            | 0.052                 | 0.93  | 0.053  | 0.94   | 0.268            | 0.78   | 0.269   | 0.78   |
| Profitability                       | 0.448                 | 0.74  | 0.451  | 0.75   | 4.729*           | 1.86   | 4.806*  | 1.89   |
| <b>Corporate governance factors</b> |                       |       |        |        |                  |        |         |        |
| Auditor                             | -0.248                | -0.68 | -0.245 | -0.67  | -2.114*          | -1.8   | -2.117* | -1.8   |
| Boardsize                           | -0.028                | -0.67 | -0.029 | -0.68  | -0.058           | -0.37  | -0.057  | -0.37  |
| Independence                        | -0.543                | -0.96 | -0.55  | -0.97  | -2.827           | -1.21  | -2.914  | -1.25  |
| Adjusted R-squared                  | 0.10%                 |       | 0.10%  |        | 0.13%            |        | 0.14%   |        |
| Year and industry fixed effects     | Yes                   |       |        |        |                  |        |         |        |
| Number of observations              | 5,006                 |       |        |        |                  |        |         |        |
| Number of firms                     | 732                   |       |        |        |                  |        |         |        |

Notes: *Riskforlook\_percent/Riskquan\_percent* is the percentage of forward-looking/quantitative words in risk-related sentences respectively; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* \*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

#### 6.4.1.3. The impact of ownership structure on the tone of risk disclosure

Regression results are reported for both the count and percentage of tone words in Table 6.11 and 6.12 respectively. The coefficients in Table 6.12 are multiplied by 10,000 to make it easier for interpretation. It is consistent in the results that institutional ownership has a strong negative effect on the negative tone of risk disclosure at the 1% level (coefficient = -0.337,  $t = -4.72$  in Table 6.11; and coefficient = -7.514,  $t = -5.05$  in Table 6.12). This ownership type is moreover positively associated the net tone at the 1% level (coefficient = 0.112,  $t = 2.92$ ). The results indicate that firms with institutional ownership are less likely to discuss risk information in the negative tone; and consequently their risk disclosure implies an overall positive tone. This result does not provide additional support to hypothesis 1b accepted in Section 6.4.1.1 regarding the positive impact of institutional ownership.

In line with the findings in Section 6.4.1.2, the results indicate that institutional investors in ASEAN countries are more sensitive to the consequences of specific risk disclosure than other types of investors. This sensitiveness can be attributed to the strong presence of foreign institutions in the region which are more exposed to the *home bias* problem (OECD, 2018). Khan et al. (2013) explain this problem as the greater risk faced by foreign investors when they have limited knowledge about local business protocols and cultures, implying increased litigation costs and proprietary costs. The result suggests that firms with institutional ownership attempt to reduce such costs by discussing less negative risk news.

This result is different from the U-shaped association between institutional ownership and the positive tone of forward-looking disclosure discussed in Section 5.4.1.3 of Chapter 5. This confirms the finding discussed above that institutional owners tend to be more cautious with risk disclosure compared to forward-looking disclosure. As risk disclosure conveys information about uncertainties, it is explicitly assumed to be pessimistic in previous studies such as Bao and Datta (2014) and Campbell et al. (2014). Some studies, such as Kravet and Muslu (2013), only focus on measuring negative risk news to examine investors'

responses to risk disclosure. Disclosing less negative information than investors' expectations would result in an overall positive tone and subsequently reduce immediate adverse market reactions. The positive result for the net tone supports this argument. As an increase in the net tone indicates incremental positive news relatively to negative news, this indicates that firms owned by institutional investors employ good risk news to weaken investors' panic beliefs and consequently benefit from increasing stock prices (Li et al., 2019).

Foreign ownership has an inverted U-shaped association with the count of positive words at the 5% level (coefficient = -0.808,  $t = -3.22$ ) and with the percentage of positive words at the 1% level (coefficient = -2.137,  $t = -2.68$ ). Moreover, this ownership type has a negative association with the net tone at the 1% level (coefficient = -0.206,  $t = -2.82$ ) while a weaker inverted U-shaped association also exists at the 10% level (coefficient = -0.297,  $t = -1.65$ ). These results indicate that foreign ownership is positively associated with the positive tone of risk disclosure but this association turns negative when ownership exceeds a certain level. This supports the finding discussed for the overall level of risk disclosure in Section 6.4.1.1 that ASEAN listed firms with foreign ownership are driven by the cost-benefit trade-off in their disclosure decisions. At low levels of shareholdings, foreign shareholders may induce firms to disclose more specific risk information to reduce litigation costs or to signal the advantage in risk management. At high levels of shareholdings, these investors get better access to other sources of corporate information and reduce their reliance on annual reports (Makhija and Patton, 2004). Moreover, large foreign shareholders in ASEAN countries are more driven by the motivation of reducing tax expense while paying less attention to corporate disclosure (Bushman et al., 2004; Wang, 2011; Garanina and Array, 2021). These investors, probably originated from neighbouring countries, focus more on exploiting hedging opportunities and reasonable stock prices in the host ASEAN countries rather than actively getting involved with monitoring management (Shirai and Sugandi, 2018; World Federation of Exchanges 2018; Zainuri, 2021). The increasing trend of cross-border M&A in the region also leads to the prevalence of share cross-holdings which complicate ownership structures

and subsequently impairs corporate transparency (Bushman et al., 2004; Wang, 2011). This result further supports hypothesis 2d which has been accepted in Section 6.4.1.1.

In contrast, government ownership has a U-shaped association with the count of positive words at the 10% level (coefficient = 1.116,  $t = 2.03$ ) and with the percentage of positive words at the 5% level (coefficient = 4.104,  $t = 2.2$ ). A similar impact of government ownership is also observed on the absolute amount of negative risk information at the 10% level (coefficient = 1.044,  $t = 1.69$ ) but not on the relative measure. This finding is consistent with the result for the overall level of risk disclosure discussed in Section 6.4.1.1 that the government is more likely to influence the extent of risk disclosure in absolute terms. While firms with low government ownership are faced with the constraints of disclosure costs, firms with high government ownership are more likely to exhibit greater disclosures to obtain legitimacy and continued support from the government as they are less exposed to post-disclosure market movements (Ferguson et al., 2002; Ntim et al., 2012a; Zeng et al., 2012; Khan et al., 2013; Alhazaimeh et al., 2014; Haddad et al., 2015; Kaur et al., 2016; Hu et al., 2017). In addition, where the government has high voting power, it puts pressure on corporate risk management and promote the sharing of value-relevant information (Williams, 1999). This result consequently supports hypothesis 4d regarding the nonlinearity between government ownership and risk disclosure.

Furthermore, Table 6.12 demonstrates that there is an inverted U-shaped association between managerial ownership and the percentage of negative words at the 1% level (coefficient = -21.847,  $t = -2.91$ ). This result suggests that managers have the incentive to release more unfavourable risk information at low levels of shareholdings. Due to the trivial economic benefits associated small shareholdings, managers are motivated to signal their ability to anticipate unfavourable risks to the market. This result is consistent with the discussion in Section 6.4.1.1 and partly supports prior studies in ASEAN countries such as Soebyakto et al. (2018) and Vu et al. (2018) that managerial ownership improves the concord between managers and shareholders. However, the impact turns



negative when managerial ownership exceeds a turning point, indicating an entrenchment effect. With influential voting power, managers have less incentives for public disclosures as they face less pressure from other shareholders. They may also attempt to reduce unfavourable stock market consequences as the result of negative risk news.

The results for control variables show that large firms are more likely to communicate positive risk information as they have the incentive to signal their effective risk management. Meanwhile, growing firms are less likely to discuss negative risk information in their annual reports. In other words, low growing firms have more incentives to convince investors that they can identify and control risks. These findings are consistent with the dominant positive effect of firm size on risk disclosure in the existing empirical literature (Oliverra et al., 2011; Linsley and Shrivs, 2006; Huafang and Jianguo, 2017; Elzahar and Hussainey, 2012; Elshandidy et al., 2015; Saggarr and Singh, 2017; Elgammal et al., 2018; Elshandidy et al., 2019; Jia et al., 2019) and the negative effect of financial performance on risk disclosure in some prior studies (Miihkinen, 2012; Saggarr and Singh, 2017). Like the results in previous sections, corporate governance factors are not significant in explaining the tone of risk disclosure among ASEAN firms.

**Table 6.11. The impact of ownership structure on the tone of risk disclosure as measured by the count of words**

| Dependent variable                  | Riskpositive_count |        |           |        | Risknegative_count |        |          |        | Risk_tone |        |         |        |
|-------------------------------------|--------------------|--------|-----------|--------|--------------------|--------|----------|--------|-----------|--------|---------|--------|
| Independent variables               | Coeff.             | t-stat | Coeff.    | t-stat | Coeff.             | t-stat | Coeff.   | t-stat | Coeff.    | t-stat | Coeff.  | t-stat |
| Constant                            | -7.059             | -14.01 | -7.018    | -14.23 | -6.611             | -11.2  | -6.585   | -11.15 | -0.445    | -5.94  | -0.427  | -5.4   |
| <b>Ownership</b>                    |                    |        |           |        |                    |        |          |        |           |        |         |        |
| Lagged Institution_own              | -0.066             | -1.18  | -0.294*   | -1.93  | -0.337***          | -4.72  | -0.469** | -2.39  | 0.112***  | 2.92   | 0.090   | 0.83   |
| Lagged Foreign_own                  | -0.116             | -1.32  | 0.582**   | 2.54   | 0.166              | 1.45   | 0.274    | 0.87   | -0.206*** | -2.82  | 0.049   | 0.32   |
| Lagged Manager_own                  | -0.059             | -0.5   | -0.291    | -0.96  | -0.040             | -0.29  | 0.332    | 0.86   | -0.033    | -0.38  | -0.337  | -1.53  |
| Lagged Government_own               | 0.506              | 1.53   | -0.465    | -0.96  | 0.188              | 0.71   | -0.737   | -1.23  | 0.119     | 1.01   | -0.166  | -0.6   |
| <b>Squared ownership</b>            |                    |        |           |        |                    |        |          |        |           |        |         |        |
| Lagged squared Institution_own      |                    |        | 0.288     | 1.5    |                    |        | 0.172    | 0.72   |           |        | 0.025   | 0.18   |
| Lagged squared Foreign_own          |                    |        | -0.808*** | -3.22  |                    |        | -0.125   | -0.36  |           |        | -0.297* | -1.65  |
| Lagged squared Manager_own          |                    |        | 0.408     | 0.84   |                    |        | -0.638   | -1.12  |           |        | 0.523   | 1.53   |
| Lagged squared Government_own       |                    |        | 1.116**   | 2.03   |                    |        | 1.044*   | 1.69   |           |        | 0.331   | 1.19   |
| <b>Company characteristics</b>      |                    |        |           |        |                    |        |          |        |           |        |         |        |
| Firmsize                            | 0.053*             | 1.71   | 0.048     | 1.58   | 0.0005             | 0.02   | 0.0009   | 0.03   | 0.026     | 1.35   | 0.023   | 1.19   |
| Growth                              | -0.029             | -1.32  | -0.029    | -1.27  | -0.049**           | -1.96  | -0.049*  | -1.93  | 0.016     | 0.93   | 0.017   | 0.94   |
| Liquidity                           | -0.004             | -0.84  | -0.004    | -0.78  | -0.002             | -0.23  | -0.002   | -0.23  | -0.003    | -0.59  | -0.003  | -0.57  |
| Leverage                            | 0.009              | 0.6    | 0.009     | 0.6    | 0.006              | 0.24   | 0.005    | 0.22   | 0.004     | 0.39   | 0.004   | 0.41   |
| Profitability                       | -0.001             | -0.01  | 0.005     | 0.04   | -0.116             | -0.72  | -0.121   | -0.76  | 0.073     | 0.86   | 0.077   | 0.9    |
| Reportsize                          | 0.878***           | 17.45  | 0.879***  | 17.77  | 0.928***           | 15.49  | 0.929*** | 15.45  |           |        |         |        |
| <b>Corporate governance factors</b> |                    |        |           |        |                    |        |          |        |           |        |         |        |
| Auditor                             | 0.068              | 1.37   | 0.066     | 1.35   | 0.084              | 1.29   | 0.079    | 1.23   | -0.008    | -0.26  | -0.006  | -0.22  |
| Boardsize                           | -0.006             | -0.63  | -0.008    | -0.91  | -0.017             | -1.61  | -0.018*  | -1.73  | 0.009*    | 1.65   | 0.009   | 1.57   |
| Independence                        | 0.084              | 0.67   | 0.051     | 0.42   | 0.112              | 0.7    | 0.102    | 0.63   | -0.067    | -0.76  | -0.081  | -0.91  |
| Adjusted R-squared                  | 38.49%             |        | 38.47%    |        | 36.51%             |        | 37.42%   |        | 0.28%     |        | 0.36%   |        |
| Year and industry fixed effects     | Yes                |        |           |        |                    |        |          |        |           |        |         |        |
| Number of observations              | 5,006              |        |           |        |                    |        | 4,901    |        |           |        |         |        |
| Number of firms                     | 732                |        |           |        |                    |        |          |        |           |        |         |        |

Notes: *Riskpositive\_count/Risknegative\_count* is the count of positive/negative words in risk-related sentences respectively; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences; *Institution\_own/Foreign\_own/Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* \*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

**Table 6.12. The impact of ownership structure on the tone of risk disclosure as measured by the percentage of words**

| Dependent variable<br>Independent variables | Riskpositive_percent |        |           |        | Risknegative_percent |        |            |        |
|---|----------------------|--------|-----------|--------|----------------------|--------|------------|--------|
|   | Coeff.               | t-stat | Coeff.    | t-stat | Coeff.               | t-stat | Coeff.     | t-stat |
| Constant                                    | 2.876                | 7.31   | 3.055     | 7.7    | 12.549               | 5.72   | 13.066     | 5.75   |
| <b>Ownership</b>                            |                      |        |           |        |                      |        |            |        |
| Lagged Institution_own                      | 0.082                | 0.44   | -0.626    | -0.89  | -7.514***            | -5.05  | -13.329*** | -3.16  |
| Lagged Foreign_own                          | -0.241               | -0.81  | 1.601**   | 2.15   | 0.360                | 0.14   | -3.664     | -0.58  |
| Lagged Manager_own                          | -0.174               | -0.37  | -0.708    | -0.66  | 1.472                | 0.59   | 14.126**   | 2.43   |
| Lagged Government_own                       | 1.872*               | 1.65   | -1.722    | -1.15  | 3.180                | 0.67   | -7.541     | -0.48  |
| <b>Squared ownership</b>                    |                      |        |           |        |                      |        |            |        |
| Lagged squared Institution_own              |                      |        | 0.907     | 1.07   |                      |        | 7.809      | 1.44   |
| Lagged squared Foreign_own                  |                      |        | -2.137*** | -2.68  |                      |        | 4.591      | 0.65   |
| Lagged squared Manager_own                  |                      |        | 0.938     | 0.52   |                      |        | -21.847*** | -2.91  |
| Lagged squared Government_own               |                      |        | 4.104**   | 2.2    |                      |        | 11.667     | 0.81   |
| <b>Company characteristics</b>              |                      |        |           |        |                      |        |            |        |
| Firm size                                   | 0.289*               | 1.66   | 0.277     | 1.63   | -0.133               | -0.61  | -0.042     | -0.18  |
| Growth                                      | -0.052               | -0.59  | -0.048    | -0.55  | -0.0005              | 0      | -0.004     | -0.01  |
| Liquidity                                   | -0.026               | -1.36  | -0.025    | -1.31  | -0.140               | -1.16  | -0.139     | -1.16  |
| Leverage                                    | 0.028                | 0.37   | 0.027     | 0.36   | -0.134               | -0.5   | -0.158     | -0.58  |
| Profitability                               | -0.263               | -0.61  | -0.255    | -0.6   | 0.888                | 0.29   | 0.688      | 0.22   |
| <b>Corporate governance factors</b>         |                      |        |           |        |                      |        |            |        |
| Auditor                                     | -0.019               | -0.11  | -0.0263   | -0.16  | 1.326                | 1.2    | 1.161      | 1.07   |
| Board size                                  | -0.032               | -0.94  | -0.039    | -1.15  | -0.156               | -0.97  | -0.162     | -1.01  |
| Independence                                | 0.383                | 0.82   | 0.289     | 0.62   | -3.003               | -1.1   | -2.778     | -1.02  |
| Adjusted R-squared                          | 0.17%                |        | 0.36%     |        | 0.65%                |        | 1.12%      |        |
| Year and industry fixed effects             | Yes                  |        |           |        |                      |        |            |        |
| Number of observations                      | 5,006                |        |           |        |                      |        |            |        |
| Number of firms                             | 732                  |        |           |        |                      |        |            |        |

Notes: *Riskpositive\_percent/Risknegative\_percent* is the percentage of positive/negative words in risk-related sentences respectively; *Institution\_own/Foreign\_own/Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firm size* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

#### **6.4.2. The impact of country characteristics to the relationship between ownership structure and risk disclosure**

##### *The impact of country income level*

Regression results for the three country groups classified by income level are reported in Table 6.13. In the high-income group, foreign ownership has an inverted U-shaped association with the count of risk sentences at the 10% level (coefficient = -0.392,  $t = -1.94$ ), suggesting that risk disclosure increases with foreign ownership but decreases when foreign ownership goes above a turning level. This supports the result discussed in Section 6.4.1.1 regarding the overall level of risk disclosure and Section 6.4.1.3 regarding the tone of risk disclosure that foreign shareholders are driven by the cost-benefit trade-off in their effect on risk disclosure levels. The result in this section further indicates that this association is more pronounced in Singapore as the mere high-income nation in the region. Meanwhile, the result for managerial ownership is opposite at the 10% level (coefficient = 0.697,  $t = 1.96$ ), supporting the discussion in Section 6.4.1.1, 6.4.1.2 and 6.4.1.3 that the interest alignment effect of managerial ownership only exists at high levels of managerial shareholdings. These results are, however, not significant when risk disclosure is measured in relative terms.

In the upper middle-income group, there is a U-shaped relationship between government ownership and risk disclosure at the 5% level (coefficient = 0.744,  $t = 2.1$  for the count of risk sentences; coefficient = 0.033,  $t = 2.09$  for the percentage of risk sentences) while the association in the lower middle-income countries is inverted U-shaped (coefficient = -5.991,  $t = -3.1$  at the 1% level for the count of risk sentences; coefficient = -0.613,  $t = -2.29$  at the 5% level for the percentage of risk sentences). These conflicting results reveal different roles played by the government in the two groups.

In the upper middle-income countries, including Malaysia and Thailand, the government is more likely to induce their investee firms to disclose risk information at high levels of shareholdings. This effect can be attributed to the active role

played by the Malaysian government in improving the efficiency of the stock market by disseminating their transparency initiatives and projects through government-linked investment companies (GLICs) and different agencies (Musallam and Muniandy, 2017). Meanwhile, the negative effect at low levels of government shareholdings can be attributed to Thailand where the government holds a relatively small share in corporate ownership (Limpaphayom and Ngamutikul, 2004; Polsiri and Jiraporn, 2012). According to World Justice Project (2021) and Transparency International (2022), the Thai government exhibits low regulatory quality and high corruption. These factors explain low incentives for risk disclosure in firms with government ownership.

Meanwhile, in lower middle-income countries, including Indonesia, Philippines and Vietnam, the inverted U-shaped effect suggests that there is a level of government ownership at which risk disclosure is maximum. The positive effect at low levels of ownership may imply partially privatised firms' efforts on attracting external capital. As discussed in Section 2.4.2 of Chapter 2, the ongoing privatisation of SOEs in ASEAN countries leads to increasing number of privatised firms which are less dependent on government's financial support. These companies have more incentives to disclose risk information to enhance their access to external finance. However, in firms with high government ownership, the association turns negative, implying that the government discourages risk disclosure where it possesses high voting power. This supports the finding in Section 5.4.2 of Chapter 5 that government ownership in ASEAN low-income countries is associated with poor transparency (World Justice Project, 2021; Transparency International, 2021).

The inverted U-shaped association between institutional ownership with the percentage of risk sentences in the upper middle-income group at the 10% level (coefficient = -0.012,  $t = -1.91$ ) indicates that there is a turning point of institutional ownership at which risk disclosure reaches its maximum. This result is inconsistent with the significant linear association in Section 6.4.1.1, 6.4.1.2 and 6.4.1.3, suggesting that institutional shareholders encourage firms in developing ASEAN countries to disclose more risk information but tend to entrench at high levels of ownership. According to OECD (2018), institutional shareholdings in ASEAN

countries mainly belong to foreign institutions, especially in Philippines. When holding a large share, these investors obtain information from other sources of corporate communication than annual reports or they are more sensitive to proprietary costs of disclosure. In addition, the result implies that institutional shareholders are more likely to influence the relative amount of risk information to the length of annual reports.

**Table 6.13. The association between ownership structure and risk disclosure by country income level**

| Dependent variable                  | Risk_count  |        |                     |        |                     |        | Risk_percent |        |                     |        |                     |        |
|-------------------------------------|-------------|--------|---------------------|--------|---------------------|--------|--------------|--------|---------------------|--------|---------------------|--------|
|                                     | High-income |        | Upper middle income |        | Lower middle income |        | High-income  |        | Upper middle income |        | Lower middle income |        |
| Country income level                | Coeff.      | t-stat | Coeff.              | t-stat | Coeff.              | t-stat | Coeff.       | t-stat | Coeff.              | t-stat | Coeff.              | t-stat |
| Constant                            | -3.297      | -5.39  | -6.386              | -17.14 | -3.58               | -4.69  | 0.07         | 7.84   | 0.062               | 12.42  | 0.034               | 2.25   |
| <b>Ownership</b>                    |             |        |                     |        |                     |        |              |        |                     |        |                     |        |
| Lagged Institution_own              | -0.089      | -0.46  | 0.185               | 1.6    | 0.111               | 0.63   | -0.024*      | -1.93  | 0.012**             | 2.22   | 0.011               | 0.81   |
| Lagged Foreign_own                  | 0.364       | 1.61   | 0.099               | 0.51   | 0.177               | 0.6    | 0.014        | 0.88   | 0.005               | 0.44   | 0.008               | 0.45   |
| Lagged Manager_own                  | -0.359      | -1.29  | -0.447              | -1.41  | 1.276               | 1.51   | -0.021       | -1.24  | -0.022              | -1.18  | 0.066*              | 1.73   |
| Lagged Government_own               | -0.706      | -0.92  | -0.641*             | -1.73  | 8.619***            | 2.73   | -0.012       | -0.38  | -0.024              | -1.47  | 0.884**             | 1.99   |
| <b>Squared ownership</b>            |             |        |                     |        |                     |        |              |        |                     |        |                     |        |
| Lagged Squared Institution_own      | 0.118       | 0.5    | -0.218              | -1.61  | -0.086              | -0.39  | 0.023        | 1.6    | -0.012*             | -1.91  | -0.016              | -0.89  |
| Lagged Squared Foreign_own          | -0.392*     | -1.94  | -0.102              | -0.5   | -0.198              | -0.64  | -0.017       | -1.16  | -0.008              | -0.57  | -0.018              | -0.92  |
| Lagged Squared Manager_own          | 0.697*      | 1.96   | 0.731               | 1.29   | -1.699              | -1.38  | 0.034        | 1.6    | 0.047               | 1.39   | -0.078              | -1.29  |
| Lagged Squared Government_own       | 0.796       | 0.94   | 0.744**             | 2.1    | -5.991***           | -3.1   | -0.007       | -0.24  | 0.033**             | 2.09   | -0.613**            | -2.29  |
| <b>Company characteristics</b>      |             |        |                     |        |                     |        |              |        |                     |        |                     |        |
| Firmsize                            | -0.004      | -0.21  | 0.003               | 0.07   | 0.025*              | 1.97   | 0.0001       | 0.14   | 0.0003              | 0.18   | 0.002*              | 1.89   |
| Growth                              | 0.035**     | 2.07   | 0.071***            | 3.53   | -0.043              | -0.93  | 0.0009       | 0.77   | 0.003***            | 2.89   | -0.002              | -0.73  |
| Liquidity                           | 0.006       | 0.94   | 0.007*              | 1.71   | 0.008               | 1.26   | 0.0009*      | 1.8    | 0.0001              | 0.42   | 0.0005              | 0.86   |
| Leverage                            | 0.017       | 1.11   | 0.022*              | 1.96   | 0.024               | 1.33   | 0.0009       | 0.86   | 0.0007              | 1.02   | 0.001               | 1.32   |
| Profitability                       | 0.065       | 0.6    | 0.071               | 0.65   | 0.292*              | 1.86   | 0.001        | 0.13   | -0.004              | -0.75  | 0.016*              | 1.68   |
| Reportsize                          | 0.699       | 10.99  | 1.032***            | 27.42  | 0.745***            | 9.56   |              |        |                     |        |                     |        |
| <b>Corporate governance factors</b> |             |        |                     |        |                     |        |              |        |                     |        |                     |        |
| Auditor                             | -0.024      | -0.31  | -0.078*             | -1.94  | 0.095               | 1.04   | -0.006       | -0.97  | -0.005**            | -2.06  | 0.001               | 0.28   |
| Boardsize                           | 0.004       | 0.44   | -0.013*             | -1.71  | 0.006               | 0.43   | 0.00007      | 0.12   | -0.0006             | -1.47  | -0.0007             | -0.67  |
| Independence                        | 0.151       | 1.03   | -0.042              | -0.42  | -0.018              | -0.06  | 0.001        | 0.2    | -0.001              | -0.23  | -0.022              | -0.93  |
| Adjusted R-squared                  | 47.47%      |        | 75.18%              |        | 29.00%              |        | 0.40%        |        | 0.27%               |        | 0.58%               |        |
| Year and industry fixed effects     | Yes         |        |                     |        |                     |        |              |        |                     |        |                     |        |
| Number of observations              | 1,316       |        | 2,823               |        | 867                 |        | 1,316        |        | 2,823               |        | 867                 |        |
| Number of firms                     | 200         |        | 397                 |        | 135                 |        | 200          |        | 397                 |        | 135                 |        |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

When ASEAN firms are classified by legal system (Table 6.14), ownership structure plays a more important role in explaining risk disclosure in common law countries, Malaysia and Singapore, and the relationship is significantly non-linear. In civil law countries, the only significant ownership type is government ownership but the association is weak.

There is an inverted U-shaped association between foreign ownership and the count of risk-related sentences (coefficient = -0.376,  $t = -2.16$  at the 5% level), and the percentage of risk-related sentences (coefficient = -0.018,  $t = -1.79$  at the 10% level). This result is consistent with the findings for foreign ownership discussed Section 6.4.1.1 and 6.4.1.3 and suggests that this association is more pronounced in ASEAN common law countries. It can be interpreted that foreign owners positively influence risk disclosure but they become entrenched when holding a significant share. This may reflect the low transparency associated with complex organisational structure in firms with offshore crossholdings which are strongly present in Malaysia, Singapore and Thailand. According to UNCTAD (2021), these countries contribute to strong intra-regional M&A activities through the consolidation of local firms both domestically and internationally to enhance their market positions. When holding a sufficient share, these investors tend to prioritise tax avoidance and pay less attention to transparency (Bushman et al., 2004; Wang, 2011; Garanina and Array, 2021).

Meanwhile, there is a U-shaped association between managerial ownership and the count of risk-related sentences at the 1% level (coefficient = 0.932,  $t = 2.87$ ); and the percentage of risk-related sentences at the 10% level (coefficient = 0.036,  $t = 1.93$ ). Like government ownership, the positive effect of managerial ownership on risk disclosure only exists when the level of ownership is sufficient. This is in line with Liu (2015) who finds that low shareholdings do not help to align managers' interests with those of shareholders. In other words, managers lack power in decision-making when their shareholdings are comparably lower than other types of shareholders. At the turning point of ownership, managers start behaving in line with shareholders' interests to benefit from favourable stock price changes. As this effect does not exist in the ASEAN civil law countries, it can be



inferred that strong governance systems in ASEAN common law countries are helpful in mitigating managers' self-serving actions at high levels of ownership. This result is inconsistent with previous studies in Singapore (Eng and Mak, 2003) and Malaysia (Akhtaruddin and Haron, 2010).

Likewise, at the 1% level, government ownership has a U-shaped association with the count of risk-related sentences (coefficient = 0.91,  $t = 3.07$ ) and the percentage of risk-related sentences (coefficient = 0.034,  $t = 2.66$ ). This means that firms disclose less risk information at low levels of government ownership but disclose more when government ownership exceeds a turning point. Compared to other ASEAN countries, the governance systems in Malaysia and Singapore are highly evaluated by World Bank (2020). These countries also have much higher rankings in the rule of law index (World Justice Project, 2021) and lower rankings in corruption than the civil law countries (Transparency International, 2021). While previous studies indicate that the governments in Malaysia and Singapore play an active entrepreneurial role in developing a healthy business environment (Ang and Ding, 2006; Tam and Tan, 2007), this result suggests that the positive effect of government ownership on risk disclosure only appears when the government ownership is sufficient. In firms with low government ownership, managers might attempt to balance the interests of different stakeholders and they are therefore less responsive to governments' disclosure initiatives. This finding further supports previous studies (Ferguson et al., 2002; Ntim et al., 2012a; Zeng et al., 2012; Khan et al., 2013; Alhazaimah et al., 2014; Haddad et al., 2015; Kaur et al., 2016; Hu et al., 2017) and the findings discussed in Section 6.4.1.1 and 6.4.1.3.

Concerning the control variables, financial leverage positively influences risk disclosure in both country groups, indicating that high-g geared firms have incentives to explain more about their risk management regardless of the legal system they are operating in. Other firm characteristics are more significant when explaining risk disclosure in common law countries. The results show that growing and liquid firms are more likely to disclose risk information while firms with a Big-4 auditor exhibit less disclosures. These results are consistent with the findings discussed in Section 6.4.1.1.

**Table 6.14. The association between ownership structure and risk disclosure by country legal system**

| Dependent variable                  | Risk_count |        |           |        | Risk_percent |        |           |        |
|-------------------------------------|------------|--------|-----------|--------|--------------|--------|-----------|--------|
|                                     | Common law |        | Civil law |        | Common law   |        | Civil law |        |
| Country legal system                | Coeff.     | t-stat | Coeff.    | t-stat | Coeff.       | t-stat | Coeff.    | t-stat |
| Constant                            | -5.718     | -13.93 | -3.794    | -7.78  | 0.059        | 12.42  | 0.063     | 8.16   |
| <b>Ownership</b>                    |            |        |           |        |              |        |           |        |
| Lagged Institution_own              | 0.118      | 1.02   | 0.184     | 1.46   | 0.0007       | 0.12   | 0.011     | 1.12   |
| Lagged Foreign_own                  | 0.327*     | 1.75   | 0.094     | 0.46   | 0.015        | 1.48   | 0.002     | 0.18   |
| Lagged Manager_own                  | -0.517**   | -2.28  | 0.419     | 1.03   | -0.019       | -1.55  | 0.007     | 0.27   |
| Lagged Government_own               | -0.890***  | -3.02  | 2.069**   | 2.06   | -0.030**     | -2.34  | 0.102     | 1.28   |
| <b>Squared ownership</b>            |            |        |           |        |              |        |           |        |
| Lagged Squared Institution_own      | -0.127     | -0.94  | -0.195    | -1.21  | -0.002       | -0.28  | -0.014    | -1.1   |
| Lagged Squared Foreign_own          | -0.376**   | -2.16  | -0.121    | -0.51  | -0.018*      | -1.79  | -0.013    | -0.81  |
| Lagged Squared Manager_own          | 0.932***   | 2.87   | -0.564    | -0.92  | 0.036*       | 1.93   | 0.017     | 0.41   |
| Lagged Squared Government_own       | 0.91***    | 3.07   | -2.046*   | -1.72  | 0.034***     | 2.66   | -0.093    | -0.97  |
| <b>Company characteristics</b>      |            |        |           |        |              |        |           |        |
| Firmsize                            | 0.012      | 0.66   | 0.008     | 0.48   | 0.0003       | 0.29   | 0.001     | 1.16   |
| Growth                              | 0.049***   | 3.31   | -0.009    | -0.26  | 0.001*       | 1.82   | -0.0005   | -0.18  |
| Liquidity                           | 0.007*     | 1.83   | 0.002     | 0.45   | 0.0007**     | 2.37   | -0.0003   | -0.67  |
| Leverage                            | 0.019*     | 1.73   | 0.028**   | 2.38   | 0.0007       | 0.98   | 0.001     | 1.61   |
| Profitability                       | 0.119      | 1.26   | 0.153     | 1.38   | -0.003       | -0.58  | 0.012     | 1.56   |
| Reportsize                          | 0.956***   | 22.14  | 0.777***  | 15.52  |              |        |           |        |
| <b>Corporate governance factors</b> |            |        |           |        |              |        |           |        |
| Auditor                             | -0.073*    | -1.65  | 0.062     | 1.17   | -0.005*      | -1.94  | -0.002    | -0.53  |
| Boardsize                           | -0.011     | -1.43  | 0.002     | 0.25   | -0.0004      | -0.96  | -0.0005   | -0.94  |
| Independence                        | -0.009     | -0.1   | 0.097     | 0.68   | -0.0001      | -0.02  | -0.004    | -0.39  |
| Adjusted R-squared                  | 56.40%     |        | 61.21%    |        | 3.57%        |        | 0.20%     |        |
| Year and industry fixed effects     | Yes        |        |           |        |              |        |           |        |
| Number of observations              | 3,110      |        | 1,896     |        | 3,110        |        | 1,896     |        |
| Number of firms                     | 449        |        | 283       |        | 449          |        | 283       |        |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* \*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

### 6.4.3. Additional analysis: The impact of IFRS adoption

As an additional analysis, the thesis extends to examine how the adoption of IFRSs affects the level of risk disclosure in ASEAN countries. In Table 6.15, regression results are reported when the dummy variable of IFRS adoption is included in the models. As being too small, the coefficients for the models using the percentage of forward-looking sentences as the dependent variable are multiplied with 1,000 to make interpretation of results easier. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

The regression results indicate that the application of IFRSs is negatively associated with the extent of risk information in ASEAN firms' annual reports at the 1% level (coefficient = -0.162 ~ -0.156;  $t = -7.99 \sim -7.77$ ) and this finding only holds when the count of risk-related sentences serves as the dependent variable. The result suggests that lower levels of risk disclosure are observed in ASEAN countries that have IFRSs mandated. As risk reporting has been intensively covered in IFRS-based financial statements, adopted firms may see it less necessary to provide additional clarification in annual report narratives while non-adopted firms have incentives to send positive signals of disclosure quality to the market through increased narrative risk information. The finding is inconsistent with Alsheikh et al. (2021) which find that IFRS application increases narrative risk disclosure in Saudi firms but supports the substitute hypothesis discussed in Zhaoyang et al. (2019) and Boateng et al. (2022) that mandatory IFRS adoption reduces firms' incentives for voluntary narrative disclosures. The results also indicate that IFRS adoption does not influence the relative amount of risk information in ASEAN firms' annual reports. Firms may aim at maintaining a minimum relative level of voluntary risk disclosure in annual report narratives regardless of the accounting standards they apply in financial reporting.

**Table 6.15. The impact of IFRS adoption on the extent of risk disclosure**

| Dependent variable                  | Risk count            |                  |              |                  | Risk percent |              |             |              |            |
|-------------------------------------|-----------------------|------------------|--------------|------------------|--------------|--------------|-------------|--------------|------------|
|                                     | Independent variables |                  | Coeff.       | t-stat           | Coeff.       | t-stat       | Coeff.      | t-stat       |            |
| Constant                            |                       | -5.214           | -18.68       | -5.205           | -19          | 48.405       | 8.02        | 48.252       | 0.82       |
| <b>Ownership</b>                    |                       |                  |              |                  |              |              |             |              |            |
| Lagged Institution_own              |                       | 0.029            | 1.12         | 0.065            | 0.79         | -0.727       | -0.47       | 3.123        | 0.63       |
| Lagged Foreign_own                  |                       | 0.014            | 0.37         | 0.283***         | 2.61         | -2.114       | -0.92       | 7.842        | 1.18       |
| Lagged Manager_own                  |                       | 0.016            | 0.26         | -0.460***        | -2.84        | 7.411**      | 2.1         | -4.28        | -0.45      |
| Lagged Government_own               |                       | -0.063           | -1.03        | -0.922***        | -4.62        | -3.923       | -1.14       | -37.064***   | -3.92      |
| <b>Squared ownership</b>            |                       |                  |              |                  |              |              |             |              |            |
| Lagged squared Institution_own      |                       |                  |              | -0.046           | -0.47        |              |             | -5.135       | -0.88      |
| Lagged squared Foreign_own          |                       |                  |              | -0.325***        | -2.81        |              |             | -11.844      | -1.61      |
| Lagged squared Manager_own          |                       |                  |              | 0.833***         | 3.36         |              |             | 20.553       | 1.43       |
| Lagged squared Government_own       |                       |                  |              | 1.049***         | 4.82         |              |             | 40.766***    | 3.86       |
| <b>IFRS_adopt</b>                   |                       | <b>-0.162***</b> | <b>-7.99</b> | <b>-0.156***</b> | <b>-7.77</b> | <b>1.829</b> | <b>1.31</b> | <b>2.102</b> | <b>1.5</b> |
| <b>Company characteristics</b>      |                       |                  |              |                  |              |              |             |              |            |
| Firm size                           |                       | 0.02***          | 3.08         | 0.020***         | 3.21         | 0.496        | 1.6         | 0.484        | 1.62       |
| Growth                              |                       | 0.021***         | 1.37         | 0.022            | 1.4          | 0.872***     | 0.82        | 0.91         | 0.85       |
| Liquidity                           |                       | 0.003            | 1            | 0.003            | 0.96         | 0.377        | 2           | 0.383        | 1.59       |
| Leverage                            |                       | 0.028***         | 3.66         | 0.027***         | 3.66         | 0.971*       | 1.9         | 0.955*       | 1.87       |
| Profitability                       |                       | 0.129*           | 1.84         | 0.133*           | 1.93         | -1.829       | -0.4        | -1.709       | -0.38      |
| Report size                         |                       | 0.935***         | 33.59        | 0.934***         | 33.75        |              |             |              |            |
| <b>Corporate governance factors</b> |                       |                  |              |                  |              |              |             |              |            |
| Auditor                             |                       | -0.025           | -0.97        | -0.024           | -0.93        | -2.173       | -1.41       | -2.073       | -1.35      |
| Board size                          |                       | -0.005           | -1.11        | -0.004           | -0.89        | 0.578**      | 2.46        | 0.602***     | 2.56       |
| Independence                        |                       | -0.172**         | -2.42        | -0.170**         | -2.4         | 3.029        | 0.82        | 3.025        | 0.82       |
| Adjusted R-squared                  |                       | 67.69%           |              | 68.70%           |              | 4.30%        |             | 5.88%        |            |
| Year and industry fixed effects     |                       | Yes              |              |                  |              |              |             |              |            |
| Number of observations              |                       | 5,006            |              |                  |              |              |             |              |            |
| Number of firms                     |                       | 732              |              |                  |              |              |             |              |            |

Notes: *Risk count/Risk percent* is the count/percentage of risk-related sentences in the annual report; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *IFRS\_adopt* is a dummy variable, equals 1 if the country adopts IFRSs in financial reporting and 0 otherwise; *Firm size* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Report size* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Board size* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

There is no significant result when the interaction terms between ownership variables and the dummy IFRS variable are included (Table 6.16), indicating that IFRS adoption does not affect the relation between ownership structure and risk disclosure in ASEAN firms. While the dominant effect of ownership on risk disclosure is concave as discussed in Section 6.4.1.1, this additional analysis implies that the effect of IFRS adoption is substituted for the monitoring of managerial behaviour, as observed through reduced narrative risk disclosure levels. By adopting IFRSs, firms enhance its accounting transparency which assures owners and therefore reduces their demand for additional risk information in annual report narratives.

**Table 6.16. The mediating impact of IFRS on the association between ownership structure and risk disclosure**

| Dependent variable                  | Risk_count            |           |        |           | Risk_percent |           |        |            |       |
|-------------------------------------|-----------------------|-----------|--------|-----------|--------------|-----------|--------|------------|-------|
|                                     | Independent variables |           | Coeff. | t-stat    | Coeff.       | t-stat    | Coeff. | t-stat     |       |
| Constant                            |                       | -5        | -17.38 | -5.018    | -17.55       | 43.192    | 7.4    | 42.68      | 7.4   |
| <b>Ownership</b>                    |                       |           |        |           |              |           |        |            |       |
| Lagged Institution_own              |                       | 0.049     | 1.18   | 0.09      | 1.04         | -0.76     | -0.30  | 1.62       | 0.32  |
| Lagged Foreign_own                  |                       | 0.009     | 0.17   | 0.258**   | 2.20         | -3.959    | -1.11  | 8.544      | 1.18  |
| Lagged Manager_own                  |                       | 0.116     | 1.04   | -0.306*   | -1.68        | 14.592*   | 1.72   | 0.353      | 0.03  |
| Lagged Government_own               |                       | -0.149    | -1.49  | -0.943*** | -4.71        | -7.036    | -0.81  | -48.012*** | -4.04 |
| <b>Squared ownership</b>            |                       |           |        |           |              |           |        |            |       |
| Lagged squared Institution_own      |                       |           |        | -0.045    | -0.46        |           |        | -2.825     | -0.49 |
| Lagged squared Foreign_own          |                       |           |        | -0.291**  | -2.50        |           |        | -14.505**  | -2.00 |
| Lagged squared Manager_own          |                       |           |        | 0.737***  | 2.93         |           |        | 24.797*    | 1.73  |
| Lagged squared Government_own       |                       |           |        | 0.948***  | 4.51         |           |        | 49.331***  | 4.59  |
| <b>IFRS_adopt</b>                   |                       | -0.484*** | -10.93 | -0.447*** | -10.04       | 17.151*** | 6.55   | 18.864***  | 7.09  |
| <b>Interaction terms</b>            |                       |           |        |           |              |           |        |            |       |
| IFRS x Lagged Institution_own       |                       | -0.031    | -0.65  | -0.038    | -0.80        | -0.16     | -0.06  | -0.462     | -0.16 |
| IFRS x Lagged Foreign_own           |                       | 0.003     | 0.04   | -0.004    | -0.07        | 2.768     | 0.72   | 2.437      | 0.65  |
| IFRS x Lagged Manager_own           |                       | -0.069    | -0.70  | -0.073    | -0.74        | -9.702    | -1.17  | -9.855     | -1.19 |
| IFRS x Lagged Government_own        |                       | 0.092     | 0.98   | 0.107     | 1.15         | 1.259     | 0.15   | 1.896      | 0.24  |
| <b>Company characteristics</b>      |                       |           |        |           |              |           |        |            |       |
| Firmsize                            |                       | 0.014**   | 2.22   | 0.014**   | 2.41         | 0.862**   | 2.32   | 0.895**    | 2.52  |
| Growth                              |                       | 0.023     | 1.49   | 0.023     | 1.50         | 0.721     | 0.66   | 0.739**    | 0.67  |
| Liquidity                           |                       | 0.003     | 0.98   | 0.004     | 1.06         | 0.318     | 1.26   | 0.325      | 1.30  |
| Leverage                            |                       | 0.024***  | 3.18   | 0.023***  | 3.19         | 0.909*    | 1.81   | 0.896*     | 1.81  |
| Profitability                       |                       | 0.118*    | 1.64   | 0.124*    | 1.74         | -1.242    | -0.27  | -0.98      | -0.22 |
| Reportsize                          |                       | 0.924***  | 32.21  | 0.924***  | 32.38        |           |        |            |       |
| <b>Corporate governance factors</b> |                       |           |        |           |              |           |        |            |       |
| Auditor                             |                       | -0.013    | -0.49  | -0.013    | -0.48        | -2.319    | -1.51  | -2.271     | -1.49 |
| Boardsize                           |                       | 0.006     | 1.18   | 0.006     | 1.20         | 0.134     | 0.56   | 0.123      | 0.52  |
| Independence                        |                       | -0.01     | -0.14  | -0.021    | -0.28        | -4.131    | -1.06  | -4.653     | -1.19 |
| Adjusted R-squared                  |                       | 69.12%    |        | 69.84%    |              | 5.57%     |        | 7.24%      |       |
| Year and industry fixed effects     |                       | Yes       |        |           |              |           |        |            |       |
| Number of observations              |                       | 4,890     |        |           |              |           |        |            |       |
| Number of firms                     |                       | 732       |        |           |              |           |        |            |       |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Institution\_own/Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively (the 1-year lagged ownership variables are used in the analysis); *IFRS\_adopt* is a dummy variable, equals 1 if the country adopts IFRSs in financial reporting and 0 otherwise; *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the debt to equity ratio; *Profitability* is rate of return on total assets; *Reportsize* is natural logarithm of total word count in an annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\* \*denotes 1% significance level, \*\* denotes 5% significance level; \* denotes 10% significance level.

## 6.5. Summary

This chapter presents and discusses regression results about the impact of ownership structure on the extent of risk disclosure in ASEAN listed firms. The results, summarised in Table 6.17, show that the non-linear association between ownership variables and risk disclosure is more pronounced than the linear effect.

**Table 6.17. Summary of the findings for the impact of ownership structure on risk disclosure**

|    | Hypothesis  | Expected sign | Result                      |
|----|---|---------------|-----------------------------|
| 1b | There is a positive association between institutional ownership and the extent of risk information disclosed by firms   | +             | Accepted                    |
| 1d | There is a non-linear association between institutional ownership and the extent of risk information disclosed by firms | ?             | Rejected                    |
| 2b | There is a positive association between foreign ownership and the extent of risk information disclosed by firms         | +             | Rejected                    |
| 2d | There is a non-linear association between foreign ownership and the extent of risk information disclosed by firms       | ?             | Accepted (inverted U shape) |
| 3b | There is a negative association between managerial ownership and the extent of risk information disclosed by firms      | -             | Rejected                    |
| 3d | There is a non-linear association between managerial ownership and the extent of risk information disclosed by firms    | ?             | Accepted (U shape)          |
| 4b | There is a positive association between government ownership and the extent of risk information disclosed by firms      | +             | Rejected                    |
| 4d | There is a non-linear association between government ownership and the extent of risk information disclosed by firms    | ?             | Accepted (U shape)          |

A U-shaped association suggests that the government positively influences risk disclosure when its ownership is sufficient, suggesting that high government ownership increases pressure on firms to enhance risk communication. Likewise, both alignment and entrenchment effects are observed in the effect of managerial ownership on risk disclosure. Managers are more likely to disclose risk information when their ownership exceeds a certain level. In contrast, an inverted U-shaped association is reported for foreign ownership, indicating that low levels of foreign ownership promote risk disclosure but this effect turns negative when foreign ownership is high. Foreign investors in the ASEAN, mainly foreign institutions, may be sensitive to the proprietary costs associated with risk disclosure at high levels of shareholdings. Compared to other ownership identities, institutional ownership is less significant in explaining risk disclosure among ASEAN firms. A weak positive effect on the overall level of risk disclosure suggests that institutional ownership strengthens the monitoring of management and thereby induces firms to pursue

transparency. In the following chapter, the thesis reports regression results for the stock market implications of disclosure by ASEAN firms.



## **CHAPTER 7: STOCK MARKET IMPLICATIONS OF FORWARD-LOOKING AND RISK DISCLOSURE BY ASEAN LISTED FIRMS**

### **7.1. Introduction**

In the previous two empirical chapters, regression results for the impact of ownership structure on forward-looking and risk disclosure have been analysed and discussed. The results have shown that ownership is an important factor in explaining the levels of disclosure among listed firms in ASEAN country members. In this chapter, the thesis extends to the analysis of stock market implications of disclosure by ASEAN listed firms. As indicated in Chapter 4 – Data collection and research methods, the consequences of disclosure are measured by four indicators: annual buy-and-hold returns, abnormal returns, stock return volatility and bid-ask spreads. These variables serve as dependent variables in the regression models in this chapter while forward-looking and risk disclosure variables are the explanatory variables. Regressions aim at testing the hypotheses developed in Section 3.4.2 of Chapter 3, namely hypotheses 5a, 5b, 5c, 7a, 7b, 7c, and 9 regarding effect of forward-looking disclosure on stock returns, stock volatility, and stock liquidity respectively and hypotheses 6a, 6b, 6c, 8a, 8b, 8c and 10 regarding effect of risk disclosure on the stock variables in the same order. Thereby, the research question 3 - *How does the stock market reacts to forward-looking and risk information in annual report narratives of ASEAN listed companies?* – is answered.

### **7.2. Descriptive statistics of stock market indicators**

In Table 7.1, summary statistics for stock market variables are presented. To remove outliers, stock returns, abnormal returns, stock volatility and bid-ask spreads have been winsorized at the 5% level on both tails. The descriptive statistics show that the average annual buy-and-hold return on ASEAN firms' stocks over the period 2009 to 2017 is 12.2% with a median of 1.89% and a standard deviation of 42.14%, indicating that stock returns are widely varying among ASEAN firms. Abnormal return is 2.75% on average with a median of

-3.97% and a standard deviation of 39.99%. While abnormal return is positive on average, the negative median suggests that the distribution of abnormal returns for ASEAN firms' stocks is largely skewed to the right. The opposite signs between the average and the median of abnormal return suggest that a majority of ASEAN listed firms' stocks generate lower returns than the market but few of them provide significantly larger returns. The high standard deviation indicates the variability of abnormal returns across ASEAN listed firms.

Stock returns are significantly volatile with a mean of 7.61% and a median of 2.57%. The average bid-ask spread is 2.74% with a median of 1.09%. Both variables have high standard deviations of 12.65% and 3.75% respectively. The results suggest that stock returns largely vary across ASEAN firms with few stocks carrying substantially higher risks and being less liquid than the majority of other stocks. These findings also imply the diversity within the ASEAN region in terms of capital market development, economic development, and the quality of legal system (UNCTAD, 2018; OECD, 2018; World Justice Project, 2021; Transparency International, 2021).

**Table 7.1. Descriptive statistics of stock market indicators**

| Variable    | Obs.  | Mean   | Median | Std. Dev. | Min     | Max     |
|-------------|-------|--------|--------|-----------|---------|---------|
| BHreturn    | 6,270 | 12.22% | 1.89%  | 42.14%    | -43.90% | 120.00% |
| ABreturn    | 6,263 | 2.75%  | -3.97% | 39.99%    | -56.73% | 101.46% |
| Volatility  | 6,403 | 7.61%  | 2.57%  | 12.65%    | 0.17%   | 51.44%  |
| Spread      | 6,562 | 2.74%  | 1.09%  | 3.75%     | 0.35%   | 14.78%  |
| Ln_Volume   | 6,445 | 11.81  | 11.83  | 2.52      | 5.31    | 16.95   |
| EP          | 5,358 | 0.1052 | 0.078  | 0.1271    | 0.0001  | 4.0556  |
| Beta        | 6,490 | 0.8227 | 0.7705 | 0.4481    | 0.0589  | 2.2     |
| Mvolatility | 6,569 | 1.13%  | 1.08%  | 0.37%     | 0.61%   | 2.29%   |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns.

Descriptive statistics for the remaining variables, served as control variables in regression models, are also shown in Table 7.1. The natural logarithm of stock trading volume, as measured in million pounds, is 11.81 which is close to the median of 11.83 and the standard deviation of 2.52. Meanwhile, the earnings to price ratio largely varies across ASEAN firms with a mean of 0.1052, a median of

0.078 and a standard deviation of 0.1271, indicating the large variability in investors' valuations of ASEAN firms' stocks. As the measure of a firm-specific risk, the average of stock beta is 0.8227 with a median of 0.7705. These figures show that ASEAN firms' stocks are generally less risky than the market. Finally, market volatility is also largely different among ASEAN countries, as observed by a standard deviation of 0.37% and a large difference between the minimum and maximum values.

To obtain an insight into the ASEAN stock markets, the descriptive statistics of the stock variables are displayed by year (Table 7.2), by country (Table 7.3) and by industry (Table 7.4). As shown in Table 7.2, the two measures of stock returns, annual buy-and-hold returns and abnormal returns, do not follow certain trends. The average buy-and-hold return is highest in 2009 at 48.71% and then goes down rapidly to 7.10% in 2011. This figure rises to 16.84% in 2012 but then wildly fluctuates in the following years of the period and ends up with a negative value of -2.69% in 2017. Abnormal returns also move sharply during the period with the highest value of 10.83% in 2016 and the lowest value of -13.45% in 2017. The other stock measures are less varying over years. Stock return volatility is high at roughly 12% between 2009 and 2011 and then maintains within a lower range of 5-6% for the rest of the period. Meanwhile, bid-ask spreads barely change over the period, standing at around 2.8%.

**Table 7.2. Descriptive statistics of stock market indicators by year**

| Year      | Variable   | Obs. | Mean    | Std. Dev. | Year      | Variable   | Obs. | Mean    | Std. Dev. |
|-----------|------------|------|---------|-----------|-----------|------------|------|---------|-----------|
|           |            |      |         |           |           |            |      |         |           |
| Year 2009 | BHreturn   | 615  | 48.71%  | 47.45%    | Year 2013 | BHreturn   | 712  | 9.25%   | 39.59%    |
|           | ABreturn   | 615  | 7.76%   | 51.89%    |           | ABreturn   | 711  | 6.32%   | 37.08%    |
|           | Volatility | 641  | 12.09%  | 17.06%    |           | Volatility | 730  | 5.23%   | 8.89%     |
|           | Spread     | 651  | 2.85%   | 3.66%     |           | Spread     | 748  | 2.51%   | 3.56%     |
| Year 2010 | BHreturn   | 653  | 19.42%  | 44.13%    | Year 2014 | BHreturn   | 731  | 2.91%   | 36.80%    |
|           | ABreturn   | 653  | 1.11%   | 43.55%    |           | ABreturn   | 731  | -2.31%  | 36.08%    |
|           | Volatility | 672  | 11.74%  | 16.89%    |           | Volatility | 746  | 5.66%   | 9.48%     |
|           | Spread     | 682  | 3.01%   | 3.83%     |           | Spread     | 760  | 2.95%   | 3.95%     |
| Year 2011 | BHreturn   | 679  | 7.10%   | 38.25%    | Year 2015 | BHreturn   | 739  | -1.71%  | 34.48%    |
|           | ABreturn   | 677  | 10.37%  | 35.49%    |           | ABreturn   | 739  | 4.46%   | 33.54%    |
|           | Volatility | 685  | 11.43%  | 16.00%    |           | Volatility | 750  | 5.98%   | 10.30%    |
|           | Spread     | 702  | 2.82%   | 3.76%     |           | Spread     | 769  | 2.74%   | 3.90%     |
| Year 2012 | BHreturn   | 687  | 16.84%  | 43.06%    | Year 2016 | BHreturn   | 729  | 16.55%  | 38.38%    |
|           | ABreturn   | 687  | 0.64%   | 43.55%    |           | ABreturn   | 728  | 10.83%  | 37.63%    |
|           | Volatility | 707  | 6.12%   | 10.06%    |           | Volatility | 740  | 6.17%   | 10.55%    |
|           | Spread     | 727  | 2.62%   | 3.51%     |           | Spread     | 764  | 2.42%   | 3.64%     |
| Year 2017 | BHreturn   | 725  | -2.69%  | 35.11%    | Year 2017 | BHreturn   | 725  | -2.69%  | 35.11%    |
|           | ABreturn   | 722  | -13.45% | 34.56%    |           | ABreturn   | 722  | -13.45% | 34.56%    |
|           | Volatility | 732  | 5.29%   | 9.35%     |           | Volatility | 732  | 5.29%   | 9.35%     |
|           | Spread     | 759  | 2.76%   | 3.84%     |           | Spread     | 759  | 2.76%   | 3.84%     |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $\text{Abnormal return}_{it} = \text{Stock return}_{it} - \text{Beta}_{it} \times \text{market return}_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between bid and ask prices divided by the average of bid and ask prices.

By country, Table 7.3 reveals that stock returns are largely different across ASEAN countries. The average buy-and-hold stock returns in the more developed ASEAN stock markets, Malaysia and Singapore, are 10.4% and 4.95% respectively. These levels are well lower than the average stock returns of around 17% in Indonesia and Thailand, and above 20% in Philippines and Vietnam. A similar pattern is observed for abnormal returns. Especially, an average of negative abnormal returns of -1.74% is reported in Singapore, suggesting that stocks provide relatively lower returns than the market in this country, which is opposite to the overall trend for the whole sample. The table also shows that stock returns are most volatile in Vietnam while Singaporean firms' stocks are least liquid.

**Table 7.3. Descriptive statistics of stock market indicators by country**

|             | Variable   | Obs.  | Mean   | Std. Dev. |           | Variable   | Obs.  | Mean   | Std. Dev. |
|-------------|------------|-------|--------|-----------|-----------|------------|-------|--------|-----------|
|             |            |       |        |           |           |            |       |        |           |
| Indonesia   | BHreturn   | 975   | 17.92% | 47.31%    | Singapore | BHreturn   | 1,648 | 4.95%  | 40.79%    |
|             | ABreturn   | 969   | 4.18%  | 45.81%    |           | ABreturn   | 1,647 | -1.74% | 38.25%    |
|             | Volatility | 1,018 | 1.95%  | 4.41%     |           | Volatility | 1,661 | 6.52%  | 10.90%    |
|             | Spread     | 1,069 | 3.17%  | 4.09%     |           | Spread     | 1,714 | 4.65%  | 5.02%     |
| Malaysia    | Variable   | Obs.  | Mean   | Std. Dev. | Thailand  | Variable   | Obs.  | Mean   | Std. Dev. |
|             | BHreturn   | 2,075 | 10.40% | 38.87%    |           | BHreturn   | 1,224 | 17.75% | 42.41%    |
|             | ABreturn   | 2,075 | 2.80%  | 37.82%    |           | ABreturn   | 1,224 | 5.53%  | 40.00%    |
|             | Volatility | 2,126 | 10.57% | 15.64%    |           | Volatility | 1,235 | 7.02%  | 10.84%    |
| Spread      | 2,141      | 2.16% | 2.70%  | Spread    | 1,273     | 1.13%      | 1.43% |        |           |
| Philippines | Variable   | Obs.  | Mean   | Std. Dev. | Vietnam   | Variable   | Obs.  | Mean   | Std. Dev. |
|             | BHreturn   | 180   | 20.54% | 43.04%    |           | BHreturn   | 168   | 23.57% | 45.88%    |
|             | ABreturn   | 180   | 8.04%  | 40.40%    |           | ABreturn   | 168   | 11.97% | 42.23%    |
|             | Volatility | 187   | 13.11% | 16.28%    |           | Volatility | 176   | 13.32% | 12.85%    |
| Spread      | 189        | 1.83% | 3.08%  | Spread    | 176       | 1.10%      | 0.79% |        |           |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $\text{Abnormal return}_{it} = \text{Stock return}_{it} - \text{Beta}_{it} \times \text{market return}_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between bid and ask prices divided by the average of bid and ask prices.

When the descriptive statistics is viewed by industry, stock returns in Healthcare sector is the highest at 19.4% on average while the figure in Energy sector is lowest at 7.1%. Stock returns in the other industries are not largely different, ranging from 10-14%. While abnormal returns in all industries are positive, the average abnormal return in Energy industry is negative at -6.12%. This means ASEAN firms' stocks are generally priced cheap by the market, except those in Energy sector. Stock return volatility is relatively higher in Consumer staples (average 11.23%) and Utilities sectors (average 10.78%) while bid-ask spreads are larger in Consumer discretionary (3.11%) and Technologies sectors (3.66%).

**Table 7.4. Descriptive statistics of stock market indicators by industry**

|                        | Variable   | Obs.  | Mean   | Std. Dev. |              | Variable   | Obs.       | Mean   | Std. Dev. |        |
|------------------------|------------|-------|--------|-----------|--------------|------------|------------|--------|-----------|--------|
|                        |            |       |        |           |              |            |            |        |           |        |
| Communications         | BHreturn   | 319   | 12.83% | 43.10%    | Healthcare   | BHreturn   | 204        | 19.40% | 40.41%    |        |
|                        | ABreturn   | 319   | 2.08%  | 40.18%    |              | ABreturn   | 204        | 12.07% | 38.24%    |        |
|                        | Volatility | 322   | 9.91%  | 14.55%    |              | Volatility | 210        | 4.78%  | 7.14%     |        |
|                        | Spread     | 327   | 1.27%  | 2.04%     |              | Spread     | 211        | 2.26%  | 3.34%     |        |
| Consumer discretionary | Variable   | Obs.  | Mean   | Std. Dev. | Industrials  | Variable   | Obs.       | Mean   | Std. Dev. |        |
|                        | BHreturn   | 1,439 | 12.62% | 40.85%    |              | BHreturn   | 1,509      | 10.81% | 42.12%    |        |
|                        | ABreturn   | 1,435 | 4.31%  | 38.46%    |              | ABreturn   | 1,509      | 1.46%  | 40.41%    |        |
|                        | Volatility | 1,471 | 7.29%  | 12.75%    |              | Volatility | 1,529      | 6.21%  | 10.84%    |        |
|                        | Spread     | 1,512 | 3.11%  | 3.95%     |              | Spread     | 1,563      | 2.83%  | 3.81%     |        |
| Consumer staples       | Variable   | Obs.  | Mean   | Std. Dev. | Materials    | Variable   | Obs.       | Mean   | Std. Dev. |        |
|                        | BHreturn   | 841   | 14.71% | 40.05%    |              | BHreturn   | 898        | 12.17% | 43.60%    |        |
|                        | ABreturn   | 841   | 5.93%  | 38.68%    |              | ABreturn   | 897        | 1.24%  | 41.04%    |        |
|                        | Volatility | 861   | 11.23% | 15.83%    |              | Volatility | 927        | 7.33%  | 12.52%    |        |
|                        | Spread     | 867   | 2.01%  | 3.19%     |              | Spread     | 968        | 3.06%  | 3.97%     |        |
| Energy                 | Variable   | Obs.  | Mean   | Std. Dev. | Technologies | Variable   | Obs.       | Mean   | Std. Dev. |        |
|                        | BHreturn   | 391   | 7.10%  | 42.79%    |              | BHreturn   | 542        | 11.83% | 46.72%    |        |
|                        | ABreturn   | 389   | -6.12% | 40.04%    |              | ABreturn   | 542        | 3.42%  | 43.94%    |        |
|                        | Volatility | 396   | 8.26%  | 12.72%    |              | Volatility | 557        | 5.72%  | 10.69%    |        |
|                        | Spread     | 422   | 2.38%  | 3.87%     |              | Spread     | 562        | 3.66%  | 3.85%     |        |
|                        | Variable   | Obs.  | Mean   | Std. Dev. | Utilities    | Variable   | Obs.       | Mean   | Std. Dev. |        |
|                        | BHreturn   | 127   | 12.37% | 35.58%    |              |            | BHreturn   | 127    | 12.37%    | 35.58% |
|                        | ABreturn   | 127   | 1.11%  | 31.52%    |              |            | ABreturn   | 127    | 1.11%     | 31.52% |
|                        | Volatility | 130   | 10.78% | 12.00%    |              |            | Volatility | 130    | 10.78%    | 12.00% |
|                        | Spread     | 130   | 1.42%  | 2.99%     |              | Spread     | 130        | 1.42%  | 2.99%     |        |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $\text{Abnormal return}_{it} = \text{Stock return}_{it} - \text{Beta}_{it} \times \text{market return}_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between bid and ask prices divided by the average of bid and ask prices.

### **7.3. Bivariate analysis**

#### **7.3.1. Bivariate analysis between forward-looking disclosure and stock dependent variables**

In this section, Pearson correlation analysis is performed to discover possible significant market consequences of disclosure in ASEAN firms. Table 7.5 and 7.6 present the correlation matrices between stock variables (dependent variable) and disclosure variables (independent variables) as measured in absolute and relative terms respectively.

The correlation coefficients between the general level of forward-looking disclosure and all four stock variables are significant at the 1% level. In Table 7.5, the coefficient between the count of forward-looking sentences and stock return volatility is 0.09; and buy-and-hold stock returns is -0.04; and abnormal returns is -0.06; and bid-ask spread is -0.31. Meanwhile, Table 7.6 shows that the coefficient between the percentage of forward-looking sentences and stock return volatility is 0.09; and buy-and-hold returns is -0.05; and abnormal returns is -0.03; and bid-ask spread is 0.04.

All themes of forward-looking disclosure are associated with bid-ask spreads and the signs of the coefficients in Table 7.5 are all negative at the 1% level. Regarding the count of thematic words, the coefficients for financial performance, strategy, structure and corporate environment are -0.25, -0.27, -0.25, -0.24 respectively. Regarding the percentage of thematic words, the coefficients for the four above themes are -0.06, -0.12, -0.06, -0.01 respectively.

The correlation between the themes of forward-looking disclosure and stock variables are more significant when disclosure is measured in relative terms. Table 7.6 indicates that stock return volatility is positively associated with all themes at the 1% level. The coefficients are 0.09 for financial performance, 0.07 for strategy, 0.03 for structure and 0.06 for corporate environment. In addition, strategy-related forward-looking information is also associated with buy-and-hold returns at the 5% level (coefficient = 0.03) and abnormal returns at the 5% level (coefficient = 0.03).

The negative tone of forward-looking disclosure is generally more correlated with stock variables than the positive tone. In Table 7.5, at the 1% level, the coefficient between the count of negative words in forward-looking sentences and buy-and-hold stock returns is -0.09; and abnormal returns is -0.1; and bid-ask spreads is -0.1. In Table 7.6, the corresponding coefficients for the percentage of negative words are -0.01, -0.09 and 0.23 respectively. A stronger correlation between the net tone of forward-looking disclosure and all four dependent variables is observed. At the 1% level, its coefficient with stock volatility is 0.04; with buy-and-hold returns is 0.07; with abnormal returns is 0.06 and with bid-ask spreads is -0.18.

### **7.3.2. Bivariate analysis between risk disclosure and stock dependent variables**

Overall, the correlation between risk disclosure and stock variables is less significant and weaker compared to forward-looking disclosure. In Table 7.5, the coefficient between the count of risk-related sentences in ASEAN firms' annual reports and bid-ask spreads is -0.25 at the 1% level; and abnormal returns is -0.03 at the 5% level. Meanwhile, the percentage of risk-related sentences is only correlated with bid-ask spreads at the 1% level with a coefficient of 0.04.

Table 7.5 shows that the two content dimensions of risk disclosure are associated with stock volatility and bid-ask spreads while Table 7.6 indicates that they are correlated with buy-and-hold returns. In Table 7.5, the coefficient between forward-looking risk information and stock volatility is -0.03 at the 5% level; and bid-ask spreads is -0.17 at the 1% level. The corresponding coefficients for quantitative risk information are 0.03 and -0.14 at the 10% level respectively. In Table 7.6, the coefficient between forward-looking risk information and buy-and-hold returns is 0.03 at the 5% level and the corresponding coefficient for quantitative risk information is 0.06 at the 1% level.

The two tables further indicate that the tone of risk disclosure is correlated with stock variables. In Table 7.5, at the 1% level, the coefficient between the positive tone of risk disclosure and stock volatility is 0.03; and buy-and-hold returns is



-0.04; and abnormal returns is -0.05; and bid-ask spreads is -0.23. The corresponding coefficients for the negative tone of risk disclosure are 0.01, -0.07, -0.08 and -0.15 respectively. However, only the negative tone is associated with the stock variables at the 1% level in Table 7.6 with corresponding coefficients of 0.07, -0.06, -0.04 and 0.05 respectively. The net tone is associated with all stock variables at the 1% level. Namely, its coefficient with stock volatility is 0.04; with buy-and-hold returns is 0.04; with abnormal returns is 0.04; and with bid-ask spreads is -0.06.

**Table 7.5. Bivariate analysis of the relationship between stock market indicators and disclosure variables as measured in absolute terms**

|                        | Volatility | BHreturn | ABreturn | Spread  | Forwlook_count | Financial_count | Strategy_count | Structure_count | Corenvi_count | Forwlookpositive_count | Forwlooknegative_count | Forwlook_tone | Risk_count | Riskquan_count | Riskforwlook_count | Risk_positive | Risk_negative |
|------------------------|------------|----------|----------|---------|----------------|-----------------|----------------|-----------------|---------------|------------------------|------------------------|---------------|------------|----------------|--------------------|---------------|---------------|
| BHreturn               | 0.09**     |          |          |         |                |                 |                |                 |               |                        |                        |               |            |                |                    |               |               |
| ABreturn               | 0.06**     | 0.91**   |          |         |                |                 |                |                 |               |                        |                        |               |            |                |                    |               |               |
| Spread                 | -0.17**    | -0.12**  | -0.09**  |         |                |                 |                |                 |               |                        |                        |               |            |                |                    |               |               |
| Forwlook_count         | 0.09**     | -0.04**  | -0.06**  | -0.31** |                |                 |                |                 |               |                        |                        |               |            |                |                    |               |               |
| Financial_count        | 0.07**     | -0.0003  | -0.02    | -0.25** | 0.7**          |                 |                |                 |               |                        |                        |               |            |                |                    |               |               |
| Strategy_count         | 0.01       | 0.02     | -0.009   | -0.27** | 0.7**          | 0.55**          |                |                 |               |                        |                        |               |            |                |                    |               |               |
| Structure_count        | 0.03*      | -0.007   | -0.02    | -0.25** | 0.74**         | 0.61**          | 0.63**         |                 |               |                        |                        |               |            |                |                    |               |               |
| Corenvi_count          | 0.004      | -0.04**  | -0.05**  | -0.24** | 0.78**         | 0.61**          | 0.64**         | 0.7**           |               |                        |                        |               |            |                |                    |               |               |
| Forwlookpositive_count | 0.05**     | -0.02    | -0.04**  | -0.27** | 0.8**          | 0.64**          | 0.64**         | 0.76**          | 0.72**        |                        |                        |               |            |                |                    |               |               |
| Forwlooknegative_count | 0.008      | -0.09**  | -0.1**   | -0.1**  | 0.67**         | 0.55**          | 0.48**         | 0.49**          | 0.63**        | 0.55**                 |                        |               |            |                |                    |               |               |
| Forwlook_tone          | 0.04**     | 0.07**   | 0.06**   | -0.18** | 0.07**         | 0.05**          | 0.12**         | 0.23**          | 0.05**        | 0.41**                 | -0.52**                |               |            |                |                    |               |               |
| Risk_count             | 0.02       | 0.005    | -0.03*   | -0.25** | 0.67**         | 0.56**          | 0.62**         | 0.61**          | 0.64**        | 0.64**                 | 0.53**                 | 0.08**        |            |                |                    |               |               |
| Riskquan_count         | -0.07**    | 0.03*    | -0.01    | -0.14** | 0.41**         | 0.39**          | 0.42**         | 0.42**          | 0.43**        | 0.42**                 | 0.37**                 | 0.03**        | 0.8**      |                |                    |               |               |
| Riskforwlook_count     | -0.03*     | 0.02     | -0.02    | -0.17** | 0.6**          | 0.54**          | 0.53**         | 0.59**          | 0.6**         | 0.6**                  | 0.51**                 | 0.03**        | 0.64**     | 0.47**         |                    |               |               |
| Risk_positive          | 0.03*      | -0.04**  | -0.05**  | -0.23** | 0.55**         | 0.43**          | 0.44**         | 0.38**          | 0.5**         | 0.47**                 | 0.5**                  | -0.06**       | 0.5**      | 0.35**         | 0.35**             |               |               |
| Risk_negative          | 0.01       | -0.07**  | -0.08**  | -0.15** | 0.48**         | 0.36**          | 0.38**         | 0.3**           | 0.46**        | 0.36**                 | 0.56**                 | -0.24**       | 0.5**      | 0.4**          | 0.3**              | 0.66**        |               |
| Risk_tone              | 0.04**     | 0.04**   | 0.04**   | -0.06** | -0.007         | -0.005          | -0.008         | 0.04**          | -0.05**       | 0.06**                 | -0.15**                | 0.22**        | -0.07**    | -0.11**        | -0.02              | 0.27**        | -0.52**       |

Notes: *Forwlook\_count* is the count of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/ negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Risk\_count* is the count of risk-related sentences in the annual report; *Riskquan\_count/ Riskforwlook\_count* is the count of quantitative/ forward-looking words in risk-related sentences; *Riskpositive\_count/ Risknegative\_count* is the count of positive/ negative words in risk-related sentences; *Risk\_tone* is the difference between the number of positive word and the number of negative words divided by the total of positive and negative words in risk-related sentences; *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $Abnormal\ return_{it} = Stock\ return_{it} - Beta_{it} \times market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between bid and ask prices divided by the average of bid and ask prices; \*\* denotes 1% significance level, \* denotes 5% significance level.

**Table 7.6. Bivariate analysis of the relationship between stock market indicators and disclosure variables as measured in relative terms**

|                          | Volatility | BHreturn | ABreturn | Spread  | Forwlook_percent | Financial_percent | Strategy_percent | Structure_percent | Corenvi_percent | Forwlook_positive_count | Forwlook_negative_percent | Risk_percent | Riskquan_percent | Riskforwlook_percent | Riskpositive_percent |
|--------------------------|------------|----------|----------|---------|------------------|-------------------|------------------|-------------------|-----------------|-------------------------|---------------------------|--------------|------------------|----------------------|----------------------|
| BHreturn                 | 0.09**     |          |          |         |                  |                   |                  |                   |                 |                         |                           |              |                  |                      |                      |
| ABreturn                 | 0.06**     | 0.91**   |          |         |                  |                   |                  |                   |                 |                         |                           |              |                  |                      |                      |
| Spread                   | -0.17**    | -0.12**  | -0.09**  |         |                  |                   |                  |                   |                 |                         |                           |              |                  |                      |                      |
| Forwlook_percent         | 0.09**     | -0.05**  | -0.03*   | 0.04**  |                  |                   |                  |                   |                 |                         |                           |              |                  |                      |                      |
| Financial_percent        | 0.07**     | 0.008    | 0.01     | -0.06** | 0.46**           |                   |                  |                   |                 |                         |                           |              |                  |                      |                      |
| Strategy_percent         | 0.03**     | 0.03*    | 0.03*    | -0.12** | 0.21**           | 0.17**            |                  |                   |                 |                         |                           |              |                  |                      |                      |
| Structure_percent        | 0.06**     | 0.002    | 0.009    | -0.06** | 0.43**           | 0.33**            | 0.29**           |                   |                 |                         |                           |              |                  |                      |                      |
| Corenvi_percent          | 0.02       | -0.03*   | -0.02    | -0.01   | 0.47**           | 0.28**            | 0.22**           | 0.4**             |                 |                         |                           |              |                  |                      |                      |
| Forwlookpositive_percent | 0.07**     | -0.009   | -0.007   | -0.03*  | 0.54**           | 0.37**            | 0.2**            | 0.52**            | 0.43**          |                         |                           |              |                  |                      |                      |
| Forwlooknegative_percent | -0.02      | -0.1**   | -0.09**  | 0.23**  | 0.53**           | 0.27**            | 0.07**           | 0.15**            | 0.34**          | 0.22**                  |                           |              |                  |                      |                      |
| Risk_percent             | 0.02       | 0.002    | -0.007   | 0.04**  | 0.1**            | 0.23**            | 0.01             | 0.15**            | 0.14**          | 0.18**                  | 0.25**                    |              |                  |                      |                      |
| Riskquan_percent         | -0.03*     | 0.06**   | 0.01     | -0.02   | -0.07**          | 0.02              | -0.03**          | -0.02             | -0.03*          | -0.02                   | 0.04**                    | 0.34**       |                  |                      |                      |
| Riskforwlook_percent     | -0.01      | 0.03*    | 0.02     | 0.02    | 0.1**            | 0.07**            | 0.03**           | 0.07**            | 0.08**          | 0.09**                  | 0.12**                    | 0.05**       | 0.007            |                      |                      |
| Riskpositive_percent     | 0.02       | -0.03*   | -0.02    | -0.03*  | 0.3**            | 0.1**             | -0.03*           | 0.01              | 0.08**          | 0.12**                  | 0.19**                    | 0.15**       | 0.03**           | 0.04**               |                      |
| Risknegative_percent     | 0.07**     | -0.06**  | -0.04**  | 0.05**  | 0.15**           | 0.03*             | -0.03*           | -0.05**           | 0.05**          | -0.03**                 | 0.28**                    | 0.12**       | 0.03*            | 0.003                | 0.26**               |

Notes: *Forwlook\_percent* is the percentage of forward-looking sentences in the annual report; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/ negative words in forward-looking sentences; *Riskquan\_percent/ Riskforwlook\_percent* is the percentage of quantitative/ forward-looking words in risk-related sentences; *Riskpositive\_percent/ Risknegative\_percent* is the percentage of positive/ negative words in risk-related sentences; *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $Abnormal\ return_{it} = Stock\ return_{it} - Beta_{it} \times market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between bid and ask prices divided by the average of bid and ask prices; \*\* denotes 1% significance level, \* denotes 5% significance level.

### **7.3.3. Variance inflation factor**

To detect possible multicollinearity problems, Variance inflation factor (VIF) is obtained for all independent and control variables. The VIFs range between 1.04 and 4.02 in Table 7.7 and 1.04 to 3.73 in Table 7.8. As the VIFs are all well below 5, there should not be a multicollinearity concern in the regression models in this chapter (Treiman, 2009, p.108; Martin and Bridgmon, 2012, p.414).

**Table 7.7. Variance inflation factors for forward-looking disclosure variables and control variables**

| Variable          | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF |
|-------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| Forwlook_count    | 3.53 | 0.28  |      |       |      |       |      |       |      |       |      |       |      |       |
| Forwlook_percent  |      |       | 1.23 | 0.82  |      |       |      |       |      |       |      |       |      |       |
| Financial_count   |      |       |      |       | 1.79 | 0.56  |      |       |      |       |      |       |      |       |
| Strategy_count    |      |       |      |       | 2.22 | 0.45  |      |       |      |       |      |       |      |       |
| Structure_count   |      |       |      |       | 2.31 | 0.43  |      |       |      |       |      |       |      |       |
| Corenvi_count     |      |       |      |       | 2.57 | 0.39  |      |       |      |       |      |       |      |       |
| Financial_percent |      |       |      |       |      |       | 1.15 | 0.87  |      |       |      |       |      |       |
| Strategy_percent  |      |       |      |       |      |       | 1.15 | 0.87  |      |       |      |       |      |       |
| Structure_percent |      |       |      |       |      |       | 1.32 | 0.76  |      |       |      |       |      |       |
| Corenvi_percent   |      |       |      |       |      |       | 1.26 | 0.79  |      |       |      |       |      |       |
| Positive_count    |      |       |      |       |      |       |      |       | 2.31 | 0.43  |      |       |      |       |
| Negative_count    |      |       |      |       |      |       |      |       | 1.73 | 0.58  |      |       |      |       |
| Positive_percent  |      |       |      |       |      |       |      |       |      |       | 1.13 | 0.89  |      |       |
| Negative_percent  |      |       |      |       |      |       |      |       |      |       | 1.16 | 0.86  |      |       |
| Forwlook_tone     |      |       |      |       |      |       |      |       |      |       |      |       | 1.07 | 0.93  |
| Institution_own   | 1.42 | 0.70  | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  |
| Foreign_own       | 1.11 | 0.90  | 1.11 | 0.90  | 1.12 | 0.89  | 1.12 | 0.90  | 1.12 | 0.89  | 1.12 | 0.89  | 1.12 | 0.90  |
| Manager_own       | 1.31 | 0.76  | 1.31 | 0.76  | 1.32 | 0.76  | 1.32 | 0.76  | 1.31 | 0.76  | 1.32 | 0.76  | 1.31 | 0.76  |
| Government_own    | 1.44 | 0.70  | 1.44 | 0.70  | 1.45 | 0.69  | 1.46 | 0.69  | 1.44 | 0.69  | 1.45 | 0.69  | 1.43 | 0.70  |
| Ln_Volume         | 2.06 | 0.49  | 2.06 | 0.49  | 2.06 | 0.48  | 2.06 | 0.48  | 2.07 | 0.48  | 2.07 | 0.48  | 2.07 | 0.48  |
| EP                | 1.10 | 0.91  | 1.11 | 0.90  | 1.10 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  |
| Beta              | 1.29 | 0.77  | 1.30 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  |
| Mvolatility       | 1.08 | 0.92  | 1.13 | 0.88  | 1.09 | 0.92  | 1.09 | 0.92  | 1.08 | 0.92  | 1.09 | 0.92  | 1.08 | 0.92  |
| Firmsize          | 1.35 | 0.74  | 1.34 | 0.75  | 1.35 | 0.74  | 1.35 | 0.74  | 1.34 | 0.75  | 1.34 | 0.75  | 1.34 | 0.75  |
| Growth            | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  |
| Leverage          | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.80  | 1.24 | 0.80  | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.81  |
| Liquidity         | 1.14 | 0.88  | 1.14 | 0.88  | 1.14 | 0.88  | 1.14 | 0.88  | 1.15 | 0.87  | 1.14 | 0.87  | 1.15 | 0.87  |
| Profitability     | 1.28 | 0.78  | 1.29 | 0.78  | 1.28 | 0.78  | 1.29 | 0.78  | 1.29 | 0.78  | 1.30 | 0.77  | 1.29 | 0.78  |
| Reportsize        | 4.02 | 0.25  | 1.64 | 0.61  | 3.34 | 0.30  | 1.64 | 0.61  | 3.02 | 0.33  | 1.64 | 0.61  | 1.59 | 0.63  |
| Auditor           | 1.13 | 0.88  | 1.14 | 0.88  | 1.13 | 0.88  | 1.14 | 0.88  | 1.13 | 0.88  | 1.14 | 0.88  | 1.13 | 0.89  |
| Boardsize         | 1.43 | 0.70  | 1.35 | 0.74  | 1.41 | 0.71  | 1.35 | 0.74  | 1.40 | 0.71  | 1.35 | 0.74  | 1.35 | 0.74  |
| Independence      | 1.16 | 0.86  | 1.20 | 0.84  | 1.22 | 0.82  | 1.18 | 0.85  | 1.18 | 0.85  | 1.19 | 0.84  | 1.18 | 0.85  |
| Mean              | 1.56 |       | 1.30 |       | 1.57 |       | 1.29 |       | 1.46 |       | 1.29 |       | 1.29 |       |

Notes: *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forwlookpositive\_count/ Forwlooknegative\_count* is the count of positive/negative words in forward-looking sentences; *ForwlookPositive\_percent/ Forwlooknegative\_percent* is the percentage of positive/negative words in forward-looking sentences; *Forwlook\_tone* is the difference between the number of positive words and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is a company's total assets scaled by the country's total; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the natural logarithm of the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board.

**Table 7.8. Variance inflation factors for risk disclosure variables and control variables**

| Variable             | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF | VIF  | 1/VIF |
|----------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| Risk_count           | 3.27 | 0.31  |      |       |      |       |      |       |      |       |      |       |      |       |
| Risk_percent         |      |       | 1.08 | 0.93  |      |       |      |       |      |       |      |       |      |       |
| Riskflook_count      |      |       |      |       | 1.52 | 0.66  |      |       |      |       |      |       |      |       |
| Riskquan_count       |      |       |      |       | 1.74 | 0.57  |      |       |      |       |      |       |      |       |
| Riskflook_percent    |      |       |      |       |      |       | 1.03 | 0.97  |      |       |      |       |      |       |
| Riskquan_percent     |      |       |      |       |      |       | 1.05 | 0.95  |      |       |      |       |      |       |
| Riskpositive_count   |      |       |      |       |      |       |      |       | 2.15 | 0.46  |      |       |      |       |
| Risknegative_count   |      |       |      |       |      |       |      |       | 2.04 | 0.49  |      |       |      |       |
| Riskpositive_percent |      |       |      |       |      |       |      |       |      |       | 1.14 | 0.88  |      |       |
| Risknegative_percent |      |       |      |       |      |       |      |       |      |       | 1.09 | 0.92  |      |       |
| Risk_tone            |      |       |      |       |      |       |      |       |      |       |      |       | 1.03 | 0.97  |
| Institution_own      | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  | 1.41 | 0.71  | 1.42 | 0.70  | 1.42 | 0.70  | 1.42 | 0.70  |
| Foreign_own          | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.12 | 0.90  | 1.12 | 0.90  |
| Manager_own          | 1.31 | 0.76  | 1.32 | 0.76  | 1.31 | 0.76  | 1.31 | 0.76  | 1.31 | 0.76  | 1.31 | 0.76  | 1.31 | 0.76  |
| Government_own       | 1.43 | 0.70  | 1.43 | 0.70  | 1.44 | 0.69  | 1.43 | 0.70  | 1.44 | 0.69  | 1.43 | 0.70  | 1.43 | 0.70  |
| Ln_Volume            | 2.05 | 0.49  | 2.05 | 0.49  | 2.06 | 0.49  | 2.06 | 0.49  | 2.06 | 0.49  | 2.06 | 0.49  | 2.07 | 0.48  |
| EP                   | 1.1  | 0.91  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  | 1.11 | 0.90  |
| Beta                 | 1.29 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  | 1.29 | 0.77  | 1.3  | 0.77  | 1.3  | 0.77  | 1.3  | 0.77  |
| Mvolatility          | 1.17 | 0.86  | 1.1  | 0.91  | 1.16 | 0.87  | 1.09 | 0.91  | 1.09 | 0.92  | 1.1  | 0.91  | 1.08 | 0.93  |
| Firmsize             | 1.35 | 0.74  | 1.34 | 0.75  | 1.34 | 0.75  | 1.34 | 0.75  | 1.34 | 0.74  | 1.34 | 0.75  | 1.34 | 0.75  |
| Growth               | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  | 1.04 | 0.96  |
| Leverage             | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.81  | 1.24 | 0.80  |
| Liquidity            | 1.14 | 0.88  | 1.14 | 0.88  | 1.14 | 0.88  | 1.14 | 0.87  | 1.14 | 0.88  | 1.14 | 0.88  | 1.14 | 0.88  |
| Profitability        | 1.28 | 0.78  | 1.28 | 0.78  | 1.28 | 0.78  | 1.28 | 0.78  | 1.28 | 0.78  | 1.28 | 0.78  | 1.28 | 0.78  |
| Reportsize           | 3.73 | 0.27  | 1.59 | 0.63  | 2.44 | 0.41  | 1.6  | 0.63  | 2.69 | 0.37  | 1.59 | 0.63  | 1.62 | 0.62  |
| Auditor              | 1.13 | 0.89  | 1.13 | 0.89  | 1.14 | 0.88  | 1.13 | 0.88  | 1.13 | 0.88  | 1.13 | 0.89  | 1.13 | 0.88  |
| Boardsize            | 1.35 | 0.74  | 1.39 | 0.72  | 1.39 | 0.72  | 1.37 | 0.73  | 1.38 | 0.73  | 1.36 | 0.74  | 1.35 | 0.74  |
| Independence         | 1.2  | 0.83  | 1.16 | 0.86  | 1.22 | 0.82  | 1.16 | 0.86  | 1.19 | 0.84  | 1.19 | 0.84  | 1.16 | 0.86  |
| Mean                 | 1.53 |       | 1.29 |       | 1.39 |       | 1.27 |       | 1.45 |       | 1.28 |       | 1.29 |       |

Notes: *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Riskflook\_count/Riskquan\_count* is the count of forward-looking/quantitative words in risk-related sentences in the annual report; *Riskflook\_percent/Riskquan\_percent* is the percentage of forward-looking/quantitative words in risk-related sentences in the annual report; *Riskpositive\_percent/Risknegative\_percent* is the percentage of positive/negative words in risk-related sentences in the annual report; *Risk\_tone* is the difference between the number of positive words and the number of negative words divided by the total of positive and negative words in risk-related sentences; *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/Foreign\_own/Manager\_own/Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the natural logarithm of the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board.

## **7.4. Multivariate analysis**

### **7.4.1. Stock market implications of forward-looking disclosure**

#### **7.4.1.1. The impact of the overall level of forward-looking disclosure**

Table 7.9 reports multivariate results for stock market implications of forward-looking disclosure by ASEAN listed firms. The results are presented for four dependent stock variables, including stock return volatility, annual buy-and-hold stock returns, annual abnormal returns, and bid-ask spreads. The R-squared for the model with the bid-ask spread as the dependent variable is 34.33% which is well higher than the R-squared of 4-6% for the remaining stock variables, suggesting that the independent variables are more meaningful in explaining stock liquidity than the other stock market consequences. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

Table 7.9 shows that the percentage of forward-looking sentences in annual report is negatively associated with stock return volatility at the 10% level (coefficient = -0.266,  $t = -1.63$ ). The count of forward-looking sentences is also negatively associated with stock volatility, but the coefficient is insignificant. As increased stock volatility implies higher perception of the risks facing a firm (Bushee and Noe, 2000), this result suggests that forward-looking information provided by listed firms in ASEAN countries reduces the uncertainty in investors' estimation of firm value and thereby mitigates the instability in stock returns. This finding is consistent with agency theory which predicts that disclosure reduces the information gap between managers and market investors and supports the empirical evidence on the favourable effect of disclosure on stock volatility (Cormier et al, 2011; Bravo, 2016; Mousa and Elamir, 2018; Yang, 2020). As a result, hypothesis 7a, which predicts lower stock volatility when forward-looking disclosure increases, is accepted.

As forward-looking information is mainly provided on a voluntary basis in ASEAN countries, it is associated with low standards and subject to managers' selectivity.

Under this circumstance, managers are more likely to disseminate this information when they believe that the associated benefits exceed the disclosure costs (Baginski et al., 2004). Moreover, Bravo (2016) argues that firms are likely to be conservative in forward-looking disclosure practices as this information is associated with high proprietary and litigation costs. On one hand, disclosure makes a firm more visible to its competitors and subsequently hinders its competitive advantage. On the other hand, managers are exposed to litigation costs resulting from inaccurate forecasts. The above result suggests that managers in ASEAN firms have incentives to employ forward-looking disclosure as a toolkit of communication to reduce agency costs and manage their relations with stakeholders.

On the other hand, forward-looking disclosure is positively associated with buy-and-hold stock returns at the 1% level when disclosure is measured in relative terms (coefficient = 1.95,  $t = 3.67$ ) and at the 10% level when disclosure is measured in absolute terms (coefficient = 0.064,  $t = 1.91$ ). These results indicate that ASEAN firms with more forward-looking information are realised and rewarded by the market via positive growing in their stock returns. This type of information reduces investors' uncertainty in predicting company's future financial performance and subsequently reduces the discount rate at which investors value their expected earnings. This finding supports prior evidence presented in Aljiri and Hussainey (2007), Hussainey and Mouselli (2010), Athanasakou and Hussainey (2014) and Bravo (2016). Hypothesis 5a which predicts a positive association between forward-looking disclosure and stock returns is, therefore, accepted.

In addition, the regression results show that forward-looking disclosure leads to higher abnormal returns. A positive association between forward-looking disclosure and abnormal returns is observed at the 1% level when disclosure is measured in relative terms (coefficient = 1.834,  $t = 3.54$ ) and at the 10% level when disclosure is measure in absolute terms (coefficient = 0.055,  $t = 1.66$ ). This supports the above finding for the buy-and-hold stock returns that investors react positively to forward-looking disclosure as this information improves their capability to estimate stock value. Consequently, investors who incorporate this information



in their stock pricing process achieve better returns than the market average. This finding is consistent with previous studies on forward-looking disclosure (Clement et al., 2003; Hussainey and Mouseli, 2010) and other types of corporate disclosure (Brown and Kim, 1993; Price et al. 2012; Liesen et al., 2017). This result provides further support for hypothesis 5a.

However, there is no significant association between forward-looking disclosure and bid-ask spreads, indicating that this information does not enhance stock liquidity in ASEAN firms and therefore hypothesis 9 is rejected. This thesis does not support previous evidence in US firms (Ascioglu et al., 2005; Balakrishnan et al., 2014; Cho and Kim, 2021) and UK firms (Elshandidy and Neri, 2015). The prevalence of ownership concentration in the region may help to explain this insignificant association. While companies in Western countries are widely held by private investors, ownership structure in ASEAN listed firms is highly concentrated with the strong presence of government, families, and foreign institutional owners (Cheung et al., 2011; Yaacob and Basiuni, 2014). For example, OECD (2018) reports that around 60-68% of shares are held by the top largest three shareholders in Indonesia, Philippines, and Malaysia. Meanwhile government ownership is highest in Malaysia with average 42% and Vietnam with average 30% as end of 2017 (OECD, 2018). Large shareholders might be less reliant on corporate public disclosure as they have better access to internal information while they are major liquidity providers to uninformed or less-informed investors through large and more frequent trades. This finding is in line with Attig et al. (2016) that large shareholdings potentially increase information asymmetry. Another possible explanation is that investors are more rational and less reliant on non-verifiable voluntary information in forward-looking disclosure when compared to mandatory disclosure. For example, Xu and Liu (2018) report that the liquidity effect of voluntary CSR disclosure in Chinese listed firms is positive in the short run but then vanishes quickly.

Collectively, the results indicate that forward-looking information disclosed by ASEAN listed firms has a strong impact on stock returns and that the annual report is an important source of corporate forward-looking information in ASEAN

countries. Increased stock returns associated with forward-looking disclosure in this study imply that ASEAN firms have the incentive to use annual reports to inform the market of their anticipations of future events that positively influence investors' perceptions of their underlying value. Compared to Western developed stock markets, most ASEAN stock markets are underdeveloped with lower availability of channels for corporate public disclosure. Under such an environment, firms are more reliant on annual reports and other types of mandatory disclosure to communicate information to the market and important stakeholders such as the government. This may help to explain why the value relevance of forward-looking information in ASEAN firms' annual reports is more pronounced than in other developed markets as discussed in Li (2006), Linsley and Shrivs (2006), Bozzolan et al. (2009), Kravet and Muslu (2013).

Overall, consistent results are obtained when forward-looking disclosure is measured by the count and the percentage of sentences in ASEAN firms' annual reports but the results for the latter measure are more significant. This means forward-looking information is more meaningful to investors when it increases in line with the length of the whole annual report. The voluntary nature of annual report narratives prepared by ASEAN firms may give rise to managers' impression management (Brennan et al., 2009; Leung et al., 2015; Koo et al., 2017). Given this discretionary feature, future-related information can be diluted or obfuscated by managers in an annual report which comprises plenty of other information types. The relative amount of forward-looking information provides investors with a clearer picture of a company and consequently assists them in estimating future earnings.

Turning to the control variables, at the 1% level, the results are consistent with prior studies which find that stock trading volume improves stock liquidity and stock returns (Ascioglu et al., 2005; Elshandidy and Neri, 2015; Akrouit and Othman, 2016; Cho and Kim, 2021) but increases stock volatility (Bravo, 2016). While earnings-to-price ratio is positively associated with stock returns at the 5% level, the coefficients for beta are negative at the 1% level, suggesting that firms with high earnings growth potential and lower risks receive higher market valuations.

This is inconsistent with Ascioğlu et al. (2005) which find that low-risk stocks are more liquid. As the measure of market risk, market volatility is positively associated with stock volatility at the 10% level and abnormal returns at the 1% level. Understandably, stock returns are more dispersed when market uncertainty increases.

Regarding ownership variables, only institutional ownership influences the stock variables. It is negatively associated with stock volatility at the 1% level and bid-ask spreads at the 10% level but does not lead to higher returns. This result supports the above assertion that institutional ownership, mainly attributed to foreign institutions in ASEAN firms, enhances stock liquidity through influential trading activities. Increased institutional ownership, however, leads to a decrease in stock value as observed through stock returns.

The size of annual report is positively associated with buy-and-hold stock returns and negatively associated with stock volatility, suggesting that annual report disclosure is informative to investors and reduces informative uncertainty. This result is in line with Botosan (1997) and Botosan and Plumlee (2002) who emphasize the importance of annual report in reducing the cost of capital.

Furthermore, the results indicate that small firms have greater returns, which is inconsistent with Mousa and Elamir (2018) and Alsahlawi et al. (2021) which report that large firms are associated with higher market valuations. On the other hand, growing firms have higher stock returns which are nevertheless more volatile than firms with lower growth potential. This implies that market investors perceive sales growth as an important indicator of a good investment opportunity but they diverge in their valuations. Among corporate governance factors, a Big-4 auditor leads to greater volatility while the percentage of independent directors reduces stock volatility at the 5% level. This implies that board independence is more effective in reducing firm risk compared to the presence of a reputable auditor. Finally, firms with a small board are more likely to have higher stock returns at the 10% level, suggesting that large boards are not effective in creating firm value in ASEAN countries.

**Table 7.9. Stock market implications of forward-looking disclosure**

| Dependent variable                  | Volatility            |       |           |        | BHreturn  |        |           |        | ABreturn  |        |           |        | Spread    |        |           |        |
|-------------------------------------|-----------------------|-------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
|                                     | Independent variables |       | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat |
| Constant                            | 0.234                 | 2.83  | 0.3       | 3.97   | 1.733     | 4.69   | 1.286     | 3.79   | 0.816     | 2.38   | 0.423     | 1.34   | 0.108     | 5.75   | 0.11      | 6.92   |
| <b>Forward-looking disclosure</b>   |                       |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Forwlook_count                      | -0.009                | -1    |           |        | 0.064*    | 1.91   |           |        | 0.055*    | 1.66   |           |        | -0.0005   | -0.37  |           |        |
| Forwlook_percent                    |                       |       | -0.266*   | -1.63  |           |        | 1.95***   | 3.67   |           |        | 1.834***  | 3.54   |           |        | 0.006     | 0.27   |
| <b>Market indicators</b>            |                       |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Ln_Volume                           | 0.017***              | 10.14 | 0.017***  | 10.12  | 0.092***  | 7.69   | 0.093***  | 7.67   | 0.086***  | 7.96   | 0.086***  | 7.94   | -0.005*** | -8.48  | -0.005*** | -8.46  |
| EP                                  | -0.018                | -1.37 | -0.018    | -1.38  | 0.308**   | 2.59   | 0.308***  | 2.62   | 0.233***  | 2.67   | 0.234***  | 2.71   | -0.004    | -1.03  | -0.004    | -1.02  |
| Beta                                | -0.005                | -0.86 | -0.005    | -0.82  | -0.154*** | -5.82  | -0.156*** | -5.91  | -0.181*** | -7.06  | -0.183*** | -7.14  | -0.002**  | -2.54  | -0.002**  | -2.54  |
| Mvolatility                         | 0.595*                | 1.66  | 0.597*    | 1.67   | -3.203    | -1.25  | -3.219    | -1.26  | 15.394*** | 6.27   | 15.376*** | 6.26   | -0.141    | -1.37  | -0.141    | -1.38  |
| <b>Ownership structure</b>          |                       |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Institution_own                     | -0.083***             | -5.49 | -0.083*** | -5.47  | -0.126*** | -2.97  | -0.128*** | -3.07  | -0.035    | -0.90  | -0.038    | -0.98  | -0.004*   | -1.80  | -0.004*   | -1.82  |
| Foreign_own                         | -0.009                | -0.47 | -0.009    | -0.49  | -0.096    | -1.59  | -0.093    | -1.55  | -0.037    | -0.64  | -0.034    | -0.59  | -0.003    | -1.34  | -0.003    | -1.33  |
| Manager_own                         | 0.008                 | 0.32  | 0.008     | 0.33   | -0.025    | -0.23  | -0.027    | -0.25  | -0.051    | -0.51  | -0.054    | -0.53  | 0.007     | 1.04   | 0.007     | 1.04   |
| Government_own                      | 0.048                 | 0.84  | 0.047     | 0.83   | -0.139    | -1.30  | -0.135    | -1.26  | -0.118    | -1.13  | -0.113    | -1.09  | -0.001    | -0.32  | -0.001    | -0.30  |
| <b>Company characteristics</b>      |                       |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Firmsize                            | 0.005                 | 1.01  | 0.005     | 1.03   | -0.060*** | -3.26  | -0.061*** | -3.33  | -0.055*** | -3.43  | -0.056*** | -3.52  | -0.0004   | -0.74  | -0.0004   | -0.75  |
| Growth                              | 0.022***              | 4.22  | 0.022***  | 4.23   | 0.058**   | 2.32   | 0.059**   | 2.34   | 0.027     | 1.18   | 0.028     | 1.18   | 0.001     | 0.93   | 0.001     | 0.92   |
| Liquidity                           | 0.002                 | 0.98  | 0.001     | 0.95   | -0.006    | -1.20  | -0.006    | -1.15  | -0.006    | -1.22  | -0.006    | -1.17  | 0.0003    | 0.82   | 0.0003    | 0.83   |
| Leverage                            | -0.004                | -0.73 | -0.004    | -0.74  | -0.019    | -1.10  | -0.019    | -1.08  | -0.014    | -0.87  | -0.0141   | -0.85  | 0.0001    | 0.18   | 0.0001    | 0.18   |
| Profitability                       | 0.018                 | 0.5   | 0.018     | 0.49   | 0.241     | 1.54   | 0.244     | 1.56   | 0.238     | 1.61   | 0.241     | 1.62   | -0.024*** | -3.02  | -0.024*** | -3.02  |
| Reportsize                          | -0.031***             | -2.96 | -0.04***  | -5.41  | -0.274*** | -6.68  | -0.215*** | -7.16  | -0.197*** | -5.13  | -0.147*** | -5.32  | -0.002    | -0.84  | -0.002    | -1.56  |
| <b>Corporate governance factors</b> |                       |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Auditor                             | 0.018**               | 2.02  | 0.019**   | 2.05   | 0.080     | 1.61   | 0.078     | 1.57   | 0.072     | 1.55   | 0.069     | 1.51   | 0.0006    | 0.28   | 0.0006    | 0.28   |
| Boardsize                           | 0.001                 | 0.62  | 0.001     | 0.57   | -0.015*   | -1.81  | -0.014*   | -1.74  | -0.016**  | -2.08  | -0.015**  | -2.01  | -0.00009  | -0.22  | -0.00009  | -0.22  |
| Independence                        | -0.077***             | -2.06 | -0.078*** | -2.04  | -0.019    | -0.18  | -0.023*   | -0.22  | 0.05      | 0.49   | 0.045     | 0.45   | -0.004    | -0.74  | -0.004    | -0.75  |
| Adjusted R-squared                  | 5.91%                 |       | 5.55%     |        | 4.53%     |        | 4.03%     |        | 6.27%     |        | 6.12%     |        | 34.33%    |        | 34.33%    |        |
| Year and industry fixed effects     | Yes                   |       |           |        |           |        |           |        |           |        |           |        |           |        |           |        |
| Number of observations              | 4,173                 |       |           |        | 4,185     |        |           |        | 4,195     |        |           |        |           |        |           |        |
| Number of firms                     | 709                   |       |           |        | 710       |        |           |        | 710       |        |           |        |           |        |           |        |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - \beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Forwlook\_count/Forwlook\_percent* is the count/percentage of forward-looking sentences in the annual report; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

#### **7.4.1.2. The impact of forward-looking disclosure themes**

In Table 7.10, regression results are reported for stock market implications of forward-looking themes in ASEAN firms' annual reports. Overall, strategy-related forward-looking information is more informative to investors than other themes. In line with the results discussed in Section 7.4.1.1, the explanatory power of independent variables on bid-ask spreads is better when compared to the other dependent variables, as observed by a R-squared of roughly 34%. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

Firstly, Table 7.10 indicates that stock returns are more volatile when forward-looking disclosures contain more financial words at the 1% level (coefficient = 0.009,  $t = 2.93$ ). The result is consistent when disclosure is measured by the percentage of financial words at the 5% level (coefficient = 14.611,  $t = 2.38$ ). This finding suggests that financial forward-looking information provided by ASEAN firms leads to greater information asymmetry among investors and consequently increases stock volatility. This is inconsistent with Bravo (2016) who finds that financial forward-looking information reduces stock return volatility due to its verifiability and accountability. Several previous studies emphasize that only verifiable financial information (Bozzolan et al., 2009) and specific information about future earnings or profit predictions (Hussainey et al., 2003) are useful in estimating firm value. Bozzolan et al. (2009) add that the increased verifiable financial information leads to lower information asymmetry only when it is not associated with an increase in the overall quantity of information. As forward-looking disclosure is provided on a voluntary basis in ASEAN firms' annual reports, it potentially contains a large amount of non-verifiable financial data. Therefore, an overall increase in financial forward-looking disclosure may create noises to the stock pricing process, which make investors more uncertain when estimating stock value and eventually lead to greater stock return volatility. Another possible reason is that financial information in other types of corporate communication is provided in a more timely manner so the financial information in annual reports might be perceived as outdated by investors (Cormier et al., 2011; Botosan, 1997). Given

the prevalence of ownership concentration in ASEAN countries (Cheung et al., 2011; Oehmichen, 2018; OECD, 2018; UNCTAD, 2018), majority shareholders may be better informed of financial information on a frequent basis while minority shareholders more rely on public disclosures like annual reports in decision-making. This unequal information access potentially increases the divergence in investors' valuations of a company's future financial performance.

Secondly, Table 7.10 shows that strategic forward-looking information, as measured by the count of strategy-related words, is positively associated with annual buy-and-hold stock returns at the 5% level (coefficient = 0.035,  $t = 2.49$ ); positively associated with abnormal returns at the 1% level (coefficient = 0.041,  $t = 2.92$ ); positively associated with bid-ask spreads at the 10% level (coefficient = 0.001,  $t = 1.83$ ). The results are consistent when this topic is measured by the percentage of strategy-related words.

The result indicates that strategic forward-looking information discussed in ASEAN firms' annual reports is perceived as value-relevant by investors and is consequently incorporated in their valuations of firms' shares. Managers' communication of future strategies, policies and development plans assists investors in identifying key drivers of future performance. As a result, investors observe an increase in this type of information as positive and subsequently anticipate higher cash flows or reduces their risk premiums. This finding supports Bozzolan et al. (2009) who find that forward-looking information about strategy improves the convergence of analyst's opinions on firm value and eventually reduces the dispersion of their forecasts. In addition, the communication of future strategic information in ASEAN firms' annual reports leads to higher abnormal returns, suggesting that firms that reporting more of this information provide better returns than the market average. This further supports the above discussion for the buy-and-hold returns that investors value strategy-related information when reading forward-looking statements in ASEAN firms' annual reports.

Nevertheless, strategy-related forward-looking disclosure is positively associated with bid-ask spreads. Although the association is weak at the 10% level, there is evidence that the differences in investors' stock valuations become wider following

this type of disclosure and hence investors are less likely to trade at a fair price. A possible reason is that strategy-related forward-looking disclosure is non-financial and voluntary so it is associated with low verifiability and credibility. This causes discrepancies in investors' interpretations of information and adversely increases information asymmetry. Additionally, the result indicates the lack of investors' confidence when trading in the developing ASEAN markets which are associated with weak investor protection (World Bank, 2020; Transparency International, 2021; World Justice Project, 2021). For instance, in the business context of the world largest developing market in China, Xu and Liu (2018) find that not all investors are sensitive to or care about corporate voluntary disclosures due to low standards and managers' selectivity. Their results suggest that investors tend to be more rational when trading with non-financial voluntary information as it takes time for them to verify the information and then adjust their trading behaviour accordingly, leading stock liquidity to decrease.

The limited strategic information in ASEAN firms' forward-looking disclosures might also contribute to lower post-disclosure stock liquidity. Beretta and Bozzolan (2008) suggest that one important attribute of disclosure quality is the balance of disclosure among different topics and subtopics. In other words, there should not be too much information concentrated in few topics while no information given in the others. The descriptive statistics discussed in Section 5.2.1 of Chapter 5, have indicated that strategy-related information is the least discussed topic among the four forward-looking themes of ASEAN firms' annual reports, regardless of country and industry. This imbalance is persistent over the study period 2009 to 2017. This disclosure strategy may be linked to managers' incentives to withhold strategy-related information due to high associated proprietary costs, which subsequently impairs the quality of this disclosure content.

The opposite effects of financial and strategy-related forward-looking information on stock return volatility further reveal the importance of annual report narratives in providing investors with value-relevant non-financial information in ASEAN countries. Brau et al. (2016) argue that textual financial information adds little value to profit numbers in financial statements which are more precise and

straightforward. Meanwhile, future strategic information is useful for investors in evaluating the consistency of the company's proposed strategies with future development goals. While narrative financial information is likely to be redundant and substituted by accounting statements, strategic information is crucial to inform investors of the company's plans to create future value. This thesis provides supporting evidence to this assertion.

Thirdly, the regression results show that stock returns are less volatile when it contains more information about corporate environment (coefficient = -0.016,  $t = -3.37$  at the 1% level). A similar result is observed when disclosure is measured in relative terms (coefficient = -20.066,  $t = -3.2$  at the 1% level). These results imply that incremental forward-looking information about the external environment helps investors better understand how a company's future performance is influenced by external factors and thereby reduces the information gap between the firm and investors. This finding supports empirical evidence discussed in Cormier et al. (2011) that business environmental disclosure significantly reduces information asymmetry in Canadian firms. While financial information is discussed on a frequent basis by firms, non-financial information is less available. In ASEAN firms, majority shareholders are less likely to extract this information privately but rely on the same source of information used by minority shareholders. When fewer investors have superior access to private information, market valuations of firm shares are more convergent, leading to the lower volatility of stock returns. Moreover, as financial information can be more frequently discussed in other reporting channels, corporate environment information provided in ASEAN firms' annual reports may be regarded as more important by investors.

Regarding the control variables, the results are consistent with the findings for stock market implications of the overall forward-looking disclosure level as discussed in Section 7.4.1.1. In addition, further evidence shows that foreign ownership is associated with lower stock returns, which is unexpected. This means firms with foreign ownership are more likely to be priced low by the market. Local market investors may associate foreign-owned firms with higher risks, or they know better and feel more confident when trading domestic firms' stocks.



**Table 7.10. Stock market implications of forward-looking themes**

| Dependent variable                  | Volatility            |           |        |            | BHreturn |           |        |           | ABreturn |           |        |            | Spread |           |        |           |       |
|-------------------------------------|-----------------------|-----------|--------|------------|----------|-----------|--------|-----------|----------|-----------|--------|------------|--------|-----------|--------|-----------|-------|
|                                     | Independent variables |           | Coeff. | t-stat     | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat     | Coeff. | t-stat    | Coeff. | t-stat    |       |
| Constant                            |                       | 0.195     | 2.42   | 0.264      | 3.63     | 1.578     | 4.44   | 1.391     | 4.1      | 0.785     | 2.39   | 0.509      | 1.63   | 0.114     | 6.27   | 0.111     | 7.03  |
| <b>Forward-looking themes</b>       |                       |           |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Financial_count                     |                       | 0.009***  | 2.93   |            |          | 0.002     | 0.14   |           |          | 0.006     | 0.42   |            |        | -0.0003   | -0.47  |           |       |
| Strategy_count                      |                       | -0.005    | -1.3   |            |          | 0.035***  | 2.49   |           |          | 0.041***  | 2.92   |            |        | 0.001*    | 1.83   |           |       |
| Structure_count                     |                       | 0.004     | 0.92   |            |          | -0.003    | -0.19  |           |          | -0.002    | -0.16  |            |        | 0.0005    | 0.62   |           |       |
| Corenvi_count                       |                       | -0.016*** | -3.37  |            |          | -0.011    | -0.67  |           |          | -0.008    | -0.49  |            |        | -0.0007   | -0.90  |           |       |
| Financial_percent                   |                       |           |        | 14.611**   | 2.38     |           |        | 32.124    | 1.40     |           |        | 49.319**   | 2.15   |           |        | -1.053    | -1.12 |
| Strategy_percent                    |                       |           |        | -16.391    | -1.15    |           |        | 116.136** | 2.21     |           |        | 146.198*** | 2.89   |           |        | 3.523*    | 1.70  |
| Structure_percent                   |                       |           |        | 5.021      | 0.68     |           |        | 21.902    | 0.79     |           |        | 11.716     | 0.42   |           |        | 1.977     | 1.43  |
| Corenvi_percent                     |                       |           |        | -20.066*** | -3.20    |           |        | -15.721   | -0.79    |           |        | -9.108     | -0.48  |           |        | -0.927    | -0.88 |
| <b>Market indicators</b>            |                       |           |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Ln_Volume                           |                       | 0.017***  | 10.18  | 0.017***   | 10.06    | 0.092***  | 7.59   | 0.092***  | 7.60     | 0.086***  | 7.88   | 0.086***   | 7.90   | -0.005*** | -8.43  | -0.005*** | -8.42 |
| EP                                  |                       | -0.019    | -1.37  | -0.018     | -1.37    | 0.301**   | 2.56   | 0.305***  | 2.57     | 0.228***  | 2.65   | 0.228***   | 2.66   | -0.004    | -1.05  | -0.004    | -1.01 |
| Beta                                |                       | -0.006    | -0.99  | -0.005     | -0.91    | -0.154*** | -5.83  | -0.155*** | -5.88    | -0.181*** | -7.08  | -0.182***  | -7.14  | -0.002**  | -2.54  | -0.002*** | -2.61 |
| Mvolatility                         |                       | 0.610*    | 1.71   | 0.638*     | 1.79     | -2.989    | -1.17  | -3.023    | -1.18    | 15.64***  | 6.34   | 15.607***  | 6.34   | -0.137    | -1.34  | -0.141    | -1.38 |
| <b>Ownership structure</b>          |                       |           |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Institution_own                     |                       | -0.081*** | -5.4   | -0.082***  | -5.45    | -0.126*** | -2.97  | -0.126*** | -2.98    | -0.037    | -0.94  | -0.037     | -0.95  | -0.004*   | -1.81  | -0.004*   | -1.88 |
| Foreign_own                         |                       | -0.006    | -0.31  | -0.007     | -0.38    | -0.103*   | -1.68  | -0.101*   | -1.66    | -0.043    | -0.74  | -0.043     | -0.73  | -0.003    | -1.32  | -0.003    | -1.32 |
| Manager_own                         |                       | 0.007     | 0.28   | 0.009      | 0.36     | -0.019    | -0.18  | -0.025    | -0.23    | -0.046    | -0.46  | -0.051     | -0.52  | 0.007     | 1.07   | 0.007     | 1.06  |
| Government_own                      |                       | 0.045     | 0.8    | 0.046      | 0.81     | -0.153    | -1.4   | -0.147    | -1.37    | -0.132    | -1.25  | -0.127     | -1.23  | -0.001    | -0.31  | -0.0008   | -0.23 |
| <b>Company characteristics</b>      |                       |           |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Firmsize                            |                       | 0.005     | 0.97   | 0.005      | 1.04     | -0.059*** | -3.15  | -0.062*** | -3.33    | -0.054*** | -3.34  | -0.058***  | -3.72  | -0.0004   | -0.72  | -0.0004   | -0.82 |
| Growth                              |                       | 0.022***  | 4.31   | 0.023***   | 4.39     | 0.061**   | 2.41   | 0.059**   | 2.35     | 0.027     | 1.28   | 0.028      | 1.19   | 0.001     | 0.97   | 0.001     | 0.89  |
| Liquidity                           |                       | 0.001     | 0.97   | 0.002      | 1.03     | -0.007    | -1.29  | -0.007    | -1.27    | -0.007    | -1.32  | -0.007     | -1.28  | 0.0003    | 0.79   | 0.0003    | 0.78  |
| Leverage                            |                       | -0.004    | -0.65  | -0.004     | -0.70    | -0.019    | -1.08  | -0.019    | -1.05    | -0.014    | -0.86  | -0.014     | -0.82  | 0.0001    | 0.19   | 0.0001    | 0.19  |
| Profitability                       |                       | 0.021     | 0.59   | 0.018      | 0.48     | 0.247     | 1.59   | 0.245     | 1.57     | 0.242     | 1.63   | 0.239      | 1.62   | -0.024*** | -3.01  | -0.024*** | -3.00 |
| Reportsize                          |                       | -0.029*** | -3.36  | -0.037***  | -5.18    | -0.236*** | -6.93  | -0.217*** | -7.17    | -0.178*** | -5.65  | -0.149***  | -5.40  | -0.003    | -1.48  | -0.002    | -1.62 |
| <b>Corporate governance factors</b> |                       |           |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Auditor                             |                       | 0.019*    | 2.21   | 0.019**    | 2.12     | 0.079     | 1.56   | 0.081     | 1.6      | 0.071     | 1.5    | 0.073      | 1.55   | 0.0006    | 0.26   | 0.0006    | 0.28  |
| Boardsize                           |                       | 0.002     | 0.65   | 0.001      | 0.58     | -0.015*   | -1.8   | -0.015*   | -1.8     | -0.016**  | -2.07  | -0.016**   | -2.06  | -0.0001   | -0.26  | -0.0001   | -0.29 |
| Independence                        |                       | -0.074*   | -1.99  | -0.075**   | -2       | -0.017    | -0.16  | -0.015    | -0.14    | 0.045     | 0.49   | 0.049      | 0.49   | -0.004    | -0.72  | -0.004    | -0.71 |
| Adjusted R-squared                  |                       | 6.71%     |        | 6.10%      |          | 5.00%     |        | 4.77%     |          | 6.83%     |        | 6.69%      |        | 34.40%    |        | 34.48%    |       |
| Year and industry fixed effects     |                       | Yes       |        |            |          |           |        |           |          |           |        |            |        |           |        |           |       |
| Number of observations              |                       | 4,173     |        |            |          | 4,185     |        |           |          | 4,195     |        |            |        |           |        |           |       |
| Number of firms                     |                       | 709       |        |            |          | 710       |        |           |          | 710       |        |            |        |           |        |           |       |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Financial\_count/ Strategy\_count/ Structure\_count/ Corenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Financial\_percent/ Strategy\_percent/ Structure\_percent/ Corenvi\_percent* is the percentage of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/

foreign investors/ managers/ government respectively; *Firm size* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Report size* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Board size* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

### **7.4.1.3. The impact of forward-looking disclosure tone**

The regression results for stock market implications of forward-looking disclosure tone are presented in Table 7.11. It is shown that investors in ASEAN stock markets only react to future positive news while no significant result is reported for negative news. It is consistent with the results discussed in Section 7.4.1.1 and 7.4.1.2 that the R-squared of the model with bid-ask spreads is higher than the R-squared of the other models, at around 35%. The coefficients are estimated by using the robust clustered standard errors technique along both year and industry dimensions to correct for heteroscedasticity.

At the 10% level, the amount of positive forward-looking information is positively associated with annual buy-and-hold stock returns (coefficient = 26.556,  $t = 1.91$ ), suggesting that stock returns increase when forward-looking disclosure conveys more good news as predicted in hypothesis 5b. This means favourable future news helps investors better predict future performance and consequently associate the stocks with incremental good news with lower risks. This information provides further assurance to the earnings reported in financial statements and thereby improve investors' confidence in trading. This finding is consistent with Cho and Kim (2021) who find that investors are more likely to buy stocks with increased good news as they perceive this as a signal of a good investment opportunity. This effect is more pronounced in ASEAN countries because firms mainly rely on annual reports for public communication and limited information is available on a more frequent basis.

Additionally, the analysis provides evidence of increases in abnormal returns following positive forward-looking disclosure. (coefficient = 26.779,  $t = 1.97$  at the 5% level). This means positive forward-looking disclosure is relatively priced high by the market. As discussed above, future positive news makes investors better informed of the disclosing firm's expected favourable outcomes of current investment projects. Consequently, investors attribute greater projected cash flows to firms with more future good news. This result supports Chen et al. (2022) that a positive news is regarded as a good signal as investors can evaluate its

consistency with actual earnings. This finding provides additional supporting evidence for hypothesis 5b.

The benefits of positive news in improving stock liquidity are also evidenced. Table 7.11 reports that bid-ask spreads are lower when more positive news is discussed in ASEAN firms' forward-looking disclosure (coefficient = -0.0002,  $t = -2.16$  at the 5% level). This result further supports the above finding that investors react to good news by incorporating it into stock prices. The information asymmetry between uninformed or less-informed investors and better-informed investors is reduced, making it easier for them to achieve a fair price.

However, there is no significant association between positive forward-looking information and stock return volatility. Although this information is considered value relevant, it does not reduce the divergence of investors' assessments of firm value as expected. As managers tend to be overly positive in their qualitative discussion, investors may doubt that whether managers' optimism is consistent with the underlying fundamentals of firms (Kothari et al., 2009). Consequently, some investors may regard future positive news as a sign of increased uncertainty, leading to the volatility of their returns. As suggested in Malaquias and Júnior (2021), other objective information such as point or range estimates of profits, rather than management's qualitative discussion, are more effective in reducing stock return volatility. Hypothesis 7b is therefore rejected.

Furthermore, this study does not find evidence of stock market reactions to forward-looking negative news as presented in Rogers et al. (2009) and Kothari et al. (2009a). As investors are more attentive to unfavourable news, firms may have the incentive to release this information when they clearly anticipate negative outcomes of a future event rather than waiting until the preparation of the annual report. As discussed in Rogers et al. (2009), managers are unlikely to disseminate bad news on a regular basis but rather use sporadic forecasts which tend to trigger investors' uncertainty. Therefore, investors perceive negative forward-looking information in annual reports as outdated or not value relevant and do not adjust their stock valuations accordingly. On the other hand, the insignificant result can be attributed to the vague language that managers adopt when discussing bad

news while they tend to impress readers more of positive news (Cho and Kim, 2021). As a result, investors are more likely to react to bad news in intermediaries' communication, such as analysts' forecasts, rather than management's discussion (Borochin et al., 2019). Together, these results do not support hypothesis 5c and 7c.

When the tone difference is considered, Table 7.12 reports a weak negative association between the net tone of forward-looking disclosure and bid-ask spreads at the 10% level (coefficient = -0.0002,  $t = -1.84$ ). This means stock liquidity increases when ASEAN firms discuss more good news than bad news in their forward-looking disclosure. While the above results suggest that investors pay more attention to future positive news than negative news when reading ASEAN firms' annual reports, this result indicates that they also consider the balance between the two tones. Comparing the relative amount of good and bad news may help investors to obtain a complete picture of the disclosing company's fundamentals and thereby set prices closer to its true value, which eventually improves stock liquidity.

The results for control variables are consistent with the findings discussed in Section 7.4.1.1. Overall, stock market variables, including trading volume, earnings-to-price ratio, stock beta and market return volatility, are most significant in explaining the dependent variables. Institutional ownership, firm size, sale growth, profitability and the annual report length are the corporate characteristics that affect the ASEAN's stock markets. Meanwhile, among corporate governance factors, board independence is more effective in reducing information asymmetry than large boards and the auditor reputation. The control variables are generally less significant in explaining bid-ask spreads when compared to stock returns and volatility.

**Table 7.11. Stock market implications of positive and negative forward-looking disclosure**

| Dependent variable                  | Volatility            |           |        |           | BHreturn |           |        |           | ABreturn |           |        |           | Spread |           |        |           |       |
|-------------------------------------|-----------------------|-----------|--------|-----------|----------|-----------|--------|-----------|----------|-----------|--------|-----------|--------|-----------|--------|-----------|-------|
|                                     | Independent variables |           | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    |       |
| Constant                            |                       | 0.232     | 2.96   | 0.288     | 3.90     | 1.478     | 4.41   | 1.382     | 4.04     | 0.685     | 2.21   | 0.486     | 1.53   | 0.108     | 6.26   | 0.109     | 6.95  |
| <b>Forward-looking tone</b>         |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Forwlookpositive_count              |                       | -0.004    | -0.87  |           |          | 0.021     | 1.23   |           |          | 0.021     | 1.27   |           |        | -0.002*   | -2.16  |           |       |
| Forwlooknegative_count              |                       | -0.004    | -0.99  |           |          | -0.009    | -0.76  |           |          | 0.002     | 0.2    |           |        | 0.001     | 1.59   |           |       |
| Forwlookpositive_percent            |                       |           |        | -1.889    | -0.54    |           |        | 26.556*   | 1.91     |           |        | 26.779**  | 1.97   |           |        | -0.662    | -0.85 |
| Forwlooknegative_percent            |                       |           |        | -5.759    | -1.15    |           |        | -16.181   | -0.90    |           |        | 6.617     | 0.37   |           |        | 1.863     | 1.51  |
| <b>Market indicators</b>            |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Ln_Volume                           |                       | 0.017***  | 10.10  | 0.017***  | 10.05    | 0.092***  | 7.58   | 0.092***  | 7.56     | 0.086***  | 7.85   | 0.086***  | 7.83   | -0.005*** | -8.43  | -0.005*** | -8.41 |
| EP                                  |                       | -0.018    | -1.38  | -0.018    | -1.35    | 0.305***  | 2.57   | 0.305**   | 2.57     | 0.232***  | 2.65   | 0.232***  | 2.64   | -0.004    | -1.05  | -0.004    | -1.04 |
| Beta                                |                       | -0.005    | -0.89  | -0.005    | -0.86    | -0.153*** | -5.80  | -0.154*** | -5.82    | -0.180*** | -7.04  | -0.181*** | -7.06  | -0.002*** | -2.58  | -0.002**  | -2.55 |
| Mvolatility                         |                       | 0.598*    | 1.66   | 0.589     | 1.64     | -3.026    | -1.18  | -3.013    | -1.17    | 15.499*** | 6.27   | 15.557*** | 6.31   | -0.154    | -1.49  | -0.147    | -1.43 |
| <b>Ownership structure</b>          |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Institution_own                     |                       | -0.083*** | -5.49  | -0.084*** | -5.50    | -0.123*** | -2.90  | -0.123*** | -2.91    | -0.033    | -0.85  | -0.033    | -0.84  | -0.004*   | -1.83  | -0.004*   | -1.83 |
| Foreign_own                         |                       | -0.008    | -0.41  | -0.009    | -0.45    | -0.099    | -1.63  | -0.103*   | -1.68    | -0.042    | -0.72  | -0.042    | -0.72  | -0.003    | -1.39  | -0.003    | -1.33 |
| Manager_own                         |                       | 0.008     | 0.33   | 0.008     | 0.33     | -0.025    | -0.23  | -0.029    | -0.27    | -0.052    | -0.52  | -0.056    | -0.56  | 0.007     | 1.04   | 0.007     | 1.05  |
| Government_own                      |                       | 0.048     | 0.84   | 0.048     | 0.85     | -0.143    | -1.33  | -0.143    | -1.34    | -0.119    | -1.16  | -0.120    | -1.17  | -0.001    | -0.34  | -0.001    | -0.32 |
| <b>Company characteristics</b>      |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Firmsize                            |                       | 0.005     | 1.04   | 0.005     | 1.05     | -0.059*** | -3.18  | -0.059*** | -3.21    | -0.055*** | -3.38  | -0.056*** | -3.41  | -0.0004   | -0.80  | -0.0004   | -0.82 |
| Growth                              |                       | 0.022***  | 4.17   | 0.022***  | 4.22     | 0.057**   | 2.29   | 0.058**   | 2.27     | 0.028     | 1.17   | 0.027     | 1.13   | 0.001     | 1.06   | 0.001     | 0.98  |
| Liquidity                           |                       | 0.001     | 0.96   | 0.002     | 0.98     | -0.007    | -1.23  | -0.007    | -1.21    | -0.006    | -1.22  | -0.006    | -1.21  | 0.0003    | 0.83   | 0.0003    | 0.84  |
| Leverage                            |                       | -0.004    | -0.71  | -0.004    | -0.72    | -0.019    | -1.09  | -0.019    | -1.09    | -0.015    | -0.88  | -0.015    | -0.89  | 0.0001    | 0.19   | 0.0001    | 0.16  |
| Profitability                       |                       | 0.017     | 0.46   | 0.016     | 0.44     | 0.246     | 1.57   | 0.246     | 1.57     | 0.244*    | 1.65   | 0.248*    | 1.67   | -0.024*** | -3.02  | -0.023*** | -3.00 |
| Reportsize                          |                       | -0.032*** | -3.73  | -0.039*** | -5.40    | -0.226*** | -6.95  | -0.215*** | -7.12    | -0.169*** | -5.68  | -0.146*** | -5.25  | -0.002    | -1.03  | -0.002    | -1.60 |
| <b>Corporate governance factors</b> |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Auditor                             |                       | 0.019**   | 2.04   | 0.019**   | 2.04     | 0.079     | 1.59   | 0.079     | 1.58     | 0.071     | 1.52   | 0.071     | 1.52   | 0.0006    | 0.26   | 0.0006    | 0.27  |
| Boardsize                           |                       | 0.001     | 0.57   | 0.001     | 0.56     | -0.015*   | -1.78  | -0.015*   | -1.78    | -0.016*   | -2.03  | -0.016**  | -2.01  | -0.00008  | -0.20  | -0.00006  | -0.17 |
| Independence                        |                       | -0.077**  | -2.05  | -0.077**  | -2.06    | -0.012    | -0.11  | -0.014    | -0.13    | 0.052     | 0.52   | 0.052     | 0.52   | -0.004    | -0.79  | -0.004    | -0.76 |
| Adjusted R-squared                  |                       | 6.15%     |        | 5.93%     |          | 4.75%     |        | 4.72%     |          | 6.42%     |        | 6.32%     |        | 34.39%    |        | 35.06%    |       |
| Year and industry fixed effects     |                       | Yes       |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Number of observations              |                       | 4,173     |        |           |          | 4,185     |        |           |          | 4,195     |        |           |        |           |        |           |       |
| Number of firms                     |                       | 709       |        |           |          | 710       |        |           |          | 710       |        |           |        |           |        |           |       |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Forwlookpositive\_count/Forwlooknegative\_count* is the count of positive/negative words in forward-looking sentences; *Forwlookpositive\_percent/Forwlooknegative\_percent* is the percentage of positive/negative words in forward-looking sentences; *Institution\_own/Foreign\_own/Manager\_own/Government\_own* is the percentage of shares held by institutional investors/foreign investors/managers/government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

**Table 7.12. Stock market implications of the net tone of forward-looking disclosure**

| Dependent variable                  | Volatility |        | BHreturn  |        | ABreturn  |        | Spread    |        |
|-------------------------------------|------------|--------|-----------|--------|-----------|--------|-----------|--------|
|                                     | Coeff.     | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat |
| Constant                            | 0.276      | 3.77   | 1.417     | 4.25   | 0.556     | 1.79   | 0.111     | 7.02   |
| <b>Forwlook_tone</b>                | 0.0007     | 0.1    | 0.014     | 0.60   | -0.002    | -0.08  | -0.002*   | -1.84  |
| <b>Market indicators</b>            |            |        |           |        |           |        |           |        |
| Ln_Volume                           | 0.017***   | 10.14  | 0.092***  | 7.59   | 0.086***  | 7.86   | -0.005*** | -8.44  |
| EP                                  | -0.018     | -1.32  | 0.303***  | 2.56   | 0.229***  | 2.63   | -0.004    | -1.03  |
| Beta                                | -0.005     | -0.86  | -0.154*** | -5.83  | -0.181*** | -7.08  | -0.002*** | -2.56  |
| Mvolatility                         | 0.595*     | 1.65   | -3.113    | -1.21  | 15.420*** | 6.24   | -0.15     | -1.45  |
| <b>Ownership structure</b>          |            |        |           |        |           |        |           |        |
| Institution_own                     | -0.084***  | -5.49  | -0.123*** | -2.90  | -0.033    | -0.84  | -0.004*   | -1.85  |
| Foreign_own                         | -0.008     | -0.44  | -0.100*   | -1.64  | -0.041    | -0.71  | -0.003    | -1.38  |
| Manager_own                         | 0.008      | 0.32   | -0.025    | -0.23  | -0.052    | -0.52  | 0.007     | 1.04   |
| Government_own                      | 0.048      | 0.85   | -0.144    | -1.34  | -0.122    | -1.18  | -0.001    | -0.32  |
| <b>Company characteristics</b>      |            |        |           |        |           |        |           |        |
| Firmsize                            | 0.005      | 1.01   | -0.059*** | -3.18  | -0.055*** | -3.35  | -0.0004   | -0.81  |
| Growth                              | 0.022***   | 4.19   | 0.059     | 2.32   | 0.029     | 1.21   | 0.001     | 1.03   |
| Liquidity                           | 0.002      | 1.00   | -0.007    | -1.24  | -0.006    | -1.26  | 0.0003    | 0.84   |
| Leverage                            | -0.004     | -0.73  | -0.019    | -1.08  | -0.014    | -0.86  | 0.0001    | 0.18   |
| Profitability                       | 0.018      | 0.48   | 0.245     | 1.57   | 0.243*    | 1.64   | -0.024*** | -3.01  |
| Reportsize                          | -0.039***  | -5.34  | -0.217*** | -7.28  | -0.149*** | -5.38  | -0.002    | -1.62  |
| <b>Corporate governance factors</b> |            |        |           |        |           |        |           |        |
| Auditor                             | 0.018**    | 2.02   | 0.080     | 1.59   | 0.072     | 1.52   | 0.0006    | 0.25   |
| Boardsize                           | 0.001      | 0.6    | -0.015*   | -1.77  | -0.016**  | -2.04  | -0.00008  | -0.20  |
| Independence                        | -0.078**   | -2.08  | -0.012    | -0.12  | 0.053     | 0.53   | -0.004    | -0.80  |
| Adjusted R-squared                  | 6.06%      |        | 4.69%     |        | 6.40%     |        | 34.54%    |        |
| Year and industry fixed effects     | Yes        |        |           |        |           |        |           |        |
| Number of observations              | 4173       |        | 4,185     |        | 4,195     |        |           |        |
| Number of firms                     | 609        |        | 710       |        | 710       |        |           |        |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Forwlook\_tone* is the difference between the number of positive words and the number of negative words divided by the total of positive and negative words in forward-looking sentences; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own*/ *Foreign\_own*/ *Manager\_own*/ *Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

## **7.4.2. Stock market implications of risk disclosure**

### **7.4.2.1. The impact of the overall level of risk disclosure**

Regression results for the effects of risk disclosure in ASEAN firms' annual reports on the stock market are reported in Table 7.13. Among the four dependent variables, only stock return volatility is significantly associated with risk disclosure. Compared to the results for forward-looking disclosure discussed above, it can be inferred that risk disclosure is less value relevant than forward-looking disclosure in ASEAN firms. In line with previous sections, the R-squared of 34.5% for the model with bid-ask spreads is well higher than those for the other models.

At the 5% level, the percentage of risk-related sentences in ASEAN firms' annual reports is negatively associated with stock return volatility (coefficient = -0.235,  $t = -2.23$ ). However, the coefficient for the count of risk-related sentences is insignificant. This result provides evidence that the risk information disclosed by ASEAN firms reduces information asymmetry. When investors are better informed of the disclosing firm's fundamental risks, they are less uncertain about the variance of the firm's cash flows and therefore less diverging in their stock valuations (Heinle and Smith, 2017). This result is inconsistent with Kravet and Muslu (2013) who find that annual risk disclosure in 10-K filings of US firms increases stock return volatility. As discussed in Kravet and Muslu (2013), the stock market impact of risk disclosure can be explained by either a divergence or convergence argument. While the discussion of unknown risks causes diverging investors' perceptions of firm risks, incremental information about known risks leads to their convergence. In ASEAN countries, the convergence effect is more pronounced possibly because firms add more information about known risks which are already discussed in previous years or other reports. This additional information updates investors that the known risks are resolved, leading to lower information uncertainty. This leads to the acceptance of hypothesis 8a which predicts a significant association between risk disclosure and stock return volatility.

However, this study does not find evidence on the relevance of risk disclosure to stock returns and stock liquidity and therefore does not support hypothesis 6a



which predicts a positive effect of risk disclosure on buy-and-hold return and hypothesis 10 which predicts a positive effect of risk disclosure on stock liquidity. These stock measures in ASEAN markets may be driven by some certain dimensions of risk disclosure rather than the overall level of risk information; or driven by other disclosure contents in annual reports, such as forward-looking information, as discussed in Section 7.4.1. Although risk disclosure is useful in reducing stock volatility, the stock market does not actively incorporate this information into stock prices. ASEAN firms have incentives to communicate risk information to influence investors' perceptions of their underlying risks but their signals are not strong enough. Incremental information about known risks or the continuing development of risk management is not sufficient to influence the stock market (Linsley and Shrides, 2006). There may be lack of specific risk information which potentially affects the company to a large extent. The specificity and precision of risk disclosure have been underlined when investigating the value relevance of risk disclosure in previous studies such as Heinle and Smith (2015) and Hope et al. (2016). In the next sections, the analysis of different dimensions of risk content in ASEAN firms' annual reports may help to better discover the market consequences of risk disclosure.

On the other hand, a majority of prior studies investigate the value relevance of risk disclosure in the context of US firms (Li, 2006; Kravet and Muslu, 2013; Campbell et al., 2014; Hope et al., 2016) or UK firms (Linsley and Shrides, 2000; 2006; Elshandidy and Neri, 2015) while limited research is conducted in the context of a developing market like the ASEAN. Firms have more incentives for voluntary disclosure and stock market reactions to disclosure are more pronounced under strong governance systems when compared to a weakly governed environment (Ntim et al., 2012b; Wang and Hussainey, 2013; Elshandidy and Neri, 2015; Xu and Liu, 2018). Risk disclosure has been mandated and standardized in the US since the early 1990s after market recessions and volatilities (Kravet and Muslu, 2013). US listed firms are required to discuss meaningful risk information that accompanying forward-looking statements as stipulated by the Safe Harbour rule in The Private Securities Litigation Reform Act 1995 or mandatorily provide risk factors in 10-K filings as required by the

Securities and Exchange Commission since 2002. In the UK, regulations and guidelines on risk disclosure are provided in the Combined Codes of Best Practice on Corporate Governance in 1998 and gradually updated since then (Linsley and Shrides, 2006). Strong governance systems in these countries support the monitoring of management behaviour and the enforcement of regulations. Meanwhile, the regulatory framework for corporate risk disclosure is underdeveloped and the quality of risk reporting is far behind in ASEAN countries. As discussed in Section 2.5.4 of Chapter 2, ASEAN firms focus more on the provision of financial risks in annual reports while other risk disclosures are generic and repetitive such as operational risks or hazards in working environment. The ASEAN governments have been making strong efforts on developing regulations and guidelines for risk disclosure but only recently since 2017. It takes time for these developments to come into effect and their effectiveness may be observed in future research.

**Table 7.13. Stock market implications of risk disclosure**

| Dependent variable                  | Volatility            |           |        |           | BHreturn |           |        |           | Abreturn |           |        |           | Spread |           |        |           |       |
|-------------------------------------|-----------------------|-----------|--------|-----------|----------|-----------|--------|-----------|----------|-----------|--------|-----------|--------|-----------|--------|-----------|-------|
|                                     | Independent variables |           | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    |       |
| Constant                            |                       | 0.241     | 2.92   | 0.298     | 4.04     | 1.531     | 4.22   | 1.383     | 4.15     | 0.605     | 1.78   | 0.526     | 1.69   | 0.118     | 6.59   | 0.108     | 6.84  |
| <b>Risk disclosure</b>              |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Risk_count                          |                       | -0.008    | -1.12  |           |          | 0.022     | 0.88   |           |          | 0.011     | 0.44   |           |        | 0.002     | 1.42   |           |       |
| Risk_percent                        |                       |           |        | -0.235**  | -2.23    |           |        | 0.470     | 1.06     |           |        | 0.307     | 0.72   |           |        | 0.027     | 1.28  |
| <b>Market indicators</b>            |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Ln_Volume                           |                       | 0.017***  | 10.16  | 0.017***  | 10.15    | 0.092***  | 7.61   | 0.092***  | 7.61     | 0.086***  | 7.88   | 0.086***  | 7.88   | -0.005*** | -8.45  | -0.005*** | -8.45 |
| EP                                  |                       | -0.018    | -1.34  | -0.018    | -1.35    | 0.304**   | 2.56   | 0.304**   | 2.56     | 0.230***  | 2.63   | 0.230***  | 2.63   | -0.004    | -1.01  | -0.004    | -1.01 |
| Beta                                |                       | -0.005    | -0.9   | -0.005    | -0.92    | -0.153    | -5.80  | -0.153*** | -5.82    | -0.181*** | -7.06  | -0.181*** | -7.07  | -0.002**  | -2.48  | -0.002**  | -2.50 |
| Mvolatility                         |                       | 0.619*    | 1.72   | 0.632*    | 1.75     | -3.251*** | -1.27  | -3.250    | -1.26    | 15.385*** | 6.24   | 15.371*** | 6.22   | -0.148    | -1.44  | -0.146    | -1.42 |
| <b>Ownership structure</b>          |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Institution_own                     |                       | -0.084*** | -5.49  | -0.083*** | -5.47    | -0.124*   | -2.92  | -0.124*** | -2.93    | -0.033    | -0.85  | -0.033    | -0.85  | -0.004*   | -1.84  | -0.004*   | -1.84 |
| Foreign_own                         |                       | -0.008    | -0.42  | -0.008    | -0.45    | -0.102    | -1.67  | -0.101*   | -1.66    | -0.042    | -0.72  | -0.041    | -0.71  | -0.003    | -1.36  | -0.003    | -1.34 |
| Manager_own                         |                       | 0.007     | 0.29   | 0.007     | 0.27     | -0.023    | -0.22  | -0.023    | -0.21    | -0.051    | -0.51  | -0.049    | -0.50  | 0.007     | 1.06   | 0.007     | 1.07  |
| Government_own                      |                       | 0.048     | 0.84   | 0.048     | 0.83     | -0.143    | -1.34  | -0.142    | -1.34    | -0.121    | -1.18  | -0.121    | -1.18  | -0.0009   | -0.27  | -0.0009   | -0.27 |
| <b>Company characteristics</b>      |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Firmsize                            |                       | 0.005     | 1.03   | 0.005     | 1.06     | -0.060*** | -3.22  | -0.060*** | -3.23    | -0.055*** | -3.36  | -0.055*** | -3.37  | -0.0004   | -0.77  | -0.0004   | -0.79 |
| Salegrowth                          |                       | 0.022***  | 4.22   | 0.022***  | 4.22     | 0.059**   | 2.32   | 0.059**   | 2.34     | 0.028     | 1.19   | 0.028     | 1.20   | 0.0009    | 0.89   | 0.001     | 0.91  |
| Liquidity                           |                       | 0.002     | 1.03   | 0.002     | 1.04     | -0.007    | -1.26  | -0.007    | -1.26    | -0.006    | -1.27  | -0.006    | -1.27  | 0.0003    | 0.81   | 0.0003    | 0.81  |
| Leverage                            |                       | -0.004    | -0.71  | -0.004    | -0.72    | -0.019    | -1.11  | -0.019    | -1.10    | -0.015    | -0.87  | -0.014    | -0.87  | 0.00009   | 0.13   | 0.0001    | 0.16  |
| Profitability                       |                       | 0.018     | 0.5    | 0.018     | 0.48     | 0.244     | 1.56   | 0.246     | 1.58     | 0.242     | 1.63   | 0.243     | 1.64   | -0.024*** | -3.04  | -0.024*** | -3.02 |
| Reportsize                          |                       | -0.032*** | -3.28  | -0.039*** | -5.47    | -0.236*** | -6.17  | -0.216*** | -7.27    | -0.158*** | -4.40  | -0.148*** | -5.37  | -0.004*   | -1.95  | -0.002    | -1.51 |
| <b>Corporate governance factors</b> |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Auditor                             |                       | 0.018**   | 1.99   | 0.017*    | 1.89     | 0.081     | 1.60   | 0.082     | 1.62     | 0.072     | 1.53   | 0.073     | 1.55   | 0.0007    | 0.32   | 0.0008    | 0.34  |
| Boardsize                           |                       | 0.001     | 0.59   | 0.001     | 0.57     | -0.015*   | -1.75  | -0.014*   | -1.75    | -0.016**  | -2.04  | -0.016**  | -2.03  | -0.00008  | -0.20  | -0.00008  | -0.20 |
| Independence                        |                       | -0.078**  | -2.08  | -0.078**  | -2.08    | -0.015    | -0.14  | -0.014    | -0.13    | 0.053     | 0.53   | 0.053     | 0.53   | -0.004    | -0.76  | -0.004    | -0.75 |
| Adjusted R-squared                  |                       | 6.17%     |        | 5.89%     |          | 4.75%     |        |           |          | 6.41%     |        | 6.37%     |        | 34.55%    |        | 34.58%    |       |
| Year and industry fixed effects     |                       | Yes       |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Number of observations              |                       | 4,173     |        |           |          | 4,185     |        |           |          | 4,195     |        |           |        |           |        |           |       |
| Number of firms                     |                       | 709       |        |           |          | 710       |        |           |          | 710       |        |           |        |           |        |           |       |

Notes: The coefficients are estimated by using the robust clustered standard errors technique along both year and company dimensions to correct for heteroscedasticity. *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - \beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Risk\_count/Risk\_percent* is the count/percentage of risk-related sentences in the annual report; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

#### **7.4.2.2. The impact of the time horizon and the quantification of risk disclosure**

In Table 7.14, regression results for the two dimensions of risk disclosure, time horizon and quantification, are reported. The coefficients are estimated by using the robust clustered standard errors technique along both year and company dimensions to correct for heteroscedasticity. This study does not find any significant impact of these dimensions on the ASEAN stock markets, suggesting that forward-looking and quantitative risk information are not considered in investors' stock valuations. This study therefore does not support previous findings in UK firms presented in Linsley and Shrives (2000) and Elshandidy et al. (2018).

As risk disclosure is expected to contain downside risk in general (Kravet and Muslu, 2013), managers are reluctant to discuss firm-specific risk information due to possible adverse stock market reactions. The descriptive statistics in Section 6.2 of Chapter 6 have indicated that forward-looking risk information is very limited in ASEAN firms' annual reports while the extent of quantitative risk information is more available. There are two possible reasons for the value irrelevance of these attributes. Firstly, investors are less likely to react to forward-looking risk disclosure if it merely contains qualitative statements or lacks specificity (Linsley and Shrives, 2006; Hope et al., 2016). The quantification of forward-looking risk disclosure would possibly affect investors' risk perceptions rather than merely qualitative future risk information. Secondly, although quantitative risk information is more available in ASEAN firms' annual reports, this information may not be firm-specific and therefore not useful for investors. For example, Oliveira et al. (2011) find that firms do not clearly distinguish between company-specific and industry risks and provide mainly quantifiable information about counterparty default risk which is unhelpful to information users. The discretion in preparing annual report narratives provides ASEAN firms' managers with freedom in selecting the disclosing content and minimizing specific risk information which would cause strong market reactions (Li, 2006).

As the quality of risk disclosure is an abstract and complex concept, its measurement is involved with multiple dimensions (Beattie et al., 2004). ASEAN

stock markets may be influenced by other content dimensions of risk disclosure rather than the two selected attributes in this study. For example, Linsley and Shrivess (2006) suggest that the spread of risk information to topics and sub-topics would enhance the richness of risk disclosure and subsequently enable a more accurate evaluation of a company's fundamental risks. Another dimension that would improve the informativeness of risk disclosure is the qualitative descriptions of economic impacts of risks on a company's future performance and its plans to manage such risks (Beretta and Bozzolan, 2004). These dimensions have been measured in several studies which apply a manual content analysis of corporate reporting such as Beattie et al. (2004), Miihkinen (2013), Elshandidy et al. (2018) and Jia et al. (2019). The adoption of automated content analysis in this study makes it hard to capture these dimensions.

Although previous studies emphasize that time-specific and quantitative risk information improves the quality of risk disclosure, empirical evidence on the stock market effect of these attributes in non-English speaking countries has not yet been found. It should be noted that a majority of prior studies is conducted in the US, the UK or European countries where English is the native language or the main language of corporate reporting (Beretta and Bozzolan, 2004; Linsley and Shrivess, 2006; Jia et al., 2019). Meanwhile, corporate disclosures are originally provided in local languages in ASEAN countries, except Malaysia and Singapore as the English-speaking nations. The translated English version of an annual report may not fully convey the messages sent by managers or may enable managers to express risk information in a more favourable way to them. Therefore, forward-looking and quantitative risk information are not perceived as credible by investors.

**Table 7.14. Stock market implications of risk content dimensions**

| Dependent variable                        | Volatility            |           |        |           | BHreturn |           |        |           | ABreturn |           |        |           | Spread |           |        |           |       |
|---|-----------------------|-----------|--------|-----------|----------|-----------|--------|-----------|----------|-----------|--------|-----------|--------|-----------|--------|-----------|-------|
|   | Independent variables |           | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    |       |
| Constant                                  |                       | 0.274     | 3.63   | 0.285     | 3.82     | 1.508     | 4.40   | 1.396     | 4.18     | 0.604     | 1.88   | 0.531     | 1.71   | 0.113     | 6.94   | 0.108     | 6.86  |
| <b>Risk disclosure content dimensions</b> |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Riskforwlook_count                        |                       | -0.002    | -0.71  |           |          | 0.016     | 1.58   |           |          | 0.009     | 0.96   |           |        | 0.0005    | 1.41   |           |       |
| Riskquan_count                            |                       | 0.0006    | 0.17   |           |          | 0.007     | 0.54   |           |          | 0.004     | 0.36   |           |        | 0.0003    | 0.68   |           |       |
| Riskforwlook_percent                      |                       |           |        | -4.111    | -0.66    |           |        | 15.478    | 0.50     |           |        | 7.876     | 0.26   |           |        | 1.303     | 1.11  |
| Riskquan_percent                          |                       |           |        | -0.441    | -0.76    |           |        | 1.742     | 0.34     |           |        | 2.249     | 0.50   |           |        | 0.159     | 1.32  |
| <b>Market indicators</b>                  |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Ln_Volume                                 |                       | 0.017***  | 10.17  | 0.017***  | 10.18    | 0.092***  | 7.59   | 0.092***  | 7.61     | 0.086***  | 7.87   | 0.086***  | 7.89   | -0.005*** | -8.45  | -0.005*** | -8.45 |
| EP  |                       | -0.018    | -1.34  | -0.018    | -1.33    | 0.305***  | 2.58   | 0.304**   | 2.56     | 0.231***  | 2.65   | 0.229***  | 2.63   | -0.004    | -1.01  | -0.004    | -1.02 |
| Beta                                      |                       | -0.005    | -0.84  | -0.005    | -0.87    | -0.154*** | -5.86  | -0.154*** | -5.84    | -0.181*** | -7.10  | -0.181*** | -7.08  | -0.002**  | -2.53  | -0.002**  | -2.52 |
| Mvolatility                               |                       | 0.591     | 1.64   | 0.586     | 1.64     | -3.222    | -1.25  | -3.154    | -1.23    | 15.392*** | 6.23   | 15.431*** | 6.26   | -0.144    | -1.39  | -0.141    | -1.36 |
| <b>Ownership structure</b>                |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Institution_own                           |                       | -0.084*** | -5.50  | -0.084*** | -5.50    | -0.123*** | -2.91  | -0.123*** | -2.91    | -0.033    | -0.84  | -0.033    | -0.84  | -0.004*   | -1.82  | -0.004*   | -1.81 |
| Foreign_own                               |                       | -0.008    | -0.44  | -0.008    | -0.44    | -0.101*   | -1.67  | -0.101*   | -1.66    | -0.041    | -0.71  | -0.041    | -0.71  | -0.003    | -1.32  | -0.003    | -1.32 |
| Manager_own                               |                       | 0.008     | 0.32   | 0.008     | 0.31     | -0.023    | -0.21  | -0.024    | -0.22    | -0.051    | -0.50  | -0.050    | -0.50  | 0.007     | 1.05   | 0.007     | 1.05  |
| Government_own                            |                       | 0.048     | 0.83   | 0.048     | 0.84     | -0.136    | -1.28  | -0.143    | -1.34    | -0.117    | -1.14  | -0.121    | -1.18  | -0.0008   | -0.22  | -0.001    | -0.28 |
| <b>Company characteristics</b>            |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Firmsize                                  |                       | 0.005     | 1.00   | 0.005     | 1.01     | -0.061*** | -3.24  | -0.059*** | -3.20    | -0.055*** | -3.37  | -0.055*** | -3.36  | -0.0004   | -0.78  | -0.0004   | -0.75 |
| Growth                                    |                       | 0.022***  | 4.22   | 0.022***  | 4.21     | 0.058**   | 2.30   | 0.059**   | 2.33     | 0.028     | 1.17   | 0.028     | 1.20   | 0.001     | 0.89   | 0.001     | 0.90  |
| Liquidity                                 |                       | 0.002     | 1.00   | 0.002     | 1.00     | -0.007    | -1.24  | -0.007    | -1.23    | -0.006    | -1.26  | -0.006    | -1.25  | 0.0003    | 0.82   | 0.0003    | 0.83  |
| Leverage                                  |                       | -0.004    | -0.72  | -0.004    | -0.73    | -0.021    | -1.13  | -0.019    | -1.09    | -0.015    | -0.88  | -0.014    | -0.86  | 0.0001    | 0.14   | 0.0001    | 0.15  |
| Profitability                             |                       | 0.018     | 0.49   | 0.018     | 0.49     | 0.242     | 1.56   | 0.245     | 1.57     | 0.241     | 1.63   | 0.242     | 1.64   | -0.024*** | -3.04  | -0.024*** | -3.02 |
| Reportsize                                |                       | -0.039*** | -4.86  | -0.039*** | -5.39    | -0.231*** | -7.13  | -0.215*** | -7.24    | -0.157*** | -5.17  | -0.148*** | -5.33  | -0.003*   | -1.82  | -0.002    | -1.43 |
| <b>Corporate governance factors</b>       |                       |           |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Auditor                                   |                       | 0.018**   | 2.02   | 0.018**   | 2.00     | 0.081     | 1.62   | 0.081     | 1.60     | 0.073     | 1.54   | 0.072     | 1.53   | 0.0007    | 0.31   | 0.0007    | 0.32  |
| Boardsize                                 |                       | 0.001     | 0.61   | 0.001     | 0.60     | -0.014*   | -1.75  | -0.015*   | -1.77    | -0.016**  | -2.03  | -0.016**  | -2.04  | -0.00008  | -0.20  | -0.00009  | -0.22 |
| Independence                              |                       | -0.078**  | -2.07  | -0.078**  | -2.08    | -0.016    | -0.15  | -0.013    | -0.12    | 0.052     | 0.52   | 0.054     | 0.54   | -0.004    | -0.76  | -0.004    | -0.74 |
| Adjusted R-squared                        |                       | 5.19%     |        | 6.07%     |          | 4.86%     |        | 4.66%     |          | 6.47%     |        | 6.41%     |        | 34.44%    |        | 34.44%    |       |
| Year and industry fixed effects           |                       | Yes       |        |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Number of observations                    |                       | 4,173     |        |           |          | 4,185     |        |           |          | 4,195     |        |           |        |           |        |           |       |
| Number of firms                           |                       | 709       |        |           |          | 710       |        |           |          | 710       |        |           |        |           |        |           |       |

Note: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - \beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Riskforwlook\_count/Riskquan\_count* is the count of forward-looking/quantitative words in risk-related sentences in the annual report; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

### 7.4.2.3. The impact of risk disclosure tone

Regression results for the impact of the tone of risk disclosure on the ASEAN stock markets are reported in Table 7.15 and 7.16. The results indicate that the tone of risk disclosure is significant in explaining stock returns and stock return volatility in ASEAN countries. The results for abnormal returns and bid-ask spreads are insignificant. The coefficients are estimated by using the robust clustered standard errors technique along both year and company dimensions to correct for heteroscedasticity.

At the 1% level, the count of positive words in risk-related sentences is negatively associated with stock return volatility (coefficient = -0.013,  $t = -3.38$ ). A similar sign of association is observed between the percentage of positive words in risk-related sentences and stock return volatility at the 5% level (coefficient = -19.319,  $t = -2.08$ ). Meanwhile, the count of negative words in risk disclosure is positively associated with stock volatility at the 1% level (coefficient = 0.019,  $t = 4.73$ ) and a similar result is reported for the percentage of negative words (coefficient = 13.081,  $t = 5.19$ ). This means positive risk news reduces stock return volatility while negative risk news increases it. Investors associate positive signals in ASEAN firms' risk disclosure with lower risks and negative risk signals with greater uncertainty. These results can be explained by the convergence and divergence arguments discussed in Kravet and Muslu (2013) and Elshandidy and Zeng (2022). The positive risk news in ASEAN firms' annual reports is related to managers' discussion of known risks and provide investors with possible outcomes of risk management. This improves investors' confidence and leads to the convergence in their estimations. Meanwhile, increased negative risk news may be related to new or unanticipated risks which increase investors' uncertainty and hence, the range of their predictions. Collectively, hypothesis 8b and 8c are both accepted.

The above results can be alternatively explained by the effect of the tone of reported risks on investors' psychology as discussed in Li et al. (2019). The study suggests that the tone of risk information is considered more credible than the tone

of general disclosure because it is more likely to bring panic to investors. Positive risk news appeases investors' panic, mitigates their irrational consciousness, and enhances their confidence in investment decisions. Conversely, negative risk news makes investors more panic and irrational in decision-making and therefore their investments are less efficient. For ASEAN firms, these effects are observed through stock return volatility.

Moreover, Table 7.15 reports that negative risk information is negatively associated with annual buy-and-hold returns at the 10% level (coefficient = -0.018,  $t = -1.71$ ) and therefore supports hypothesis 6c regarding a statistically significant association between risk disclosure and stock returns. The coefficient for the percentage of negative words in risk sentences is consistent and significant at the 10% level (coefficient = -10.416,  $t = -1.95$ ). Meanwhile, the results for positive risk information are not significant, hence, hypothesis 6b is rejected. This means investors perceive an increase in negative risk news as an indication of unfavourable changes in firm value. According to Li (2006), managers tend to highlight negative risk news when they clearly foresee bad earnings news in the future. Investors perceive this signal as credible and subsequently incorporate it into the stock pricing process. This finding also suggests that the stock market reacts more strongly to unfavourable than favourable risk news, which is consistent with the majority of recent risk disclosure studies (Hassanein et al., 2021; Hassanein and Elsayed, 2021; Elshandidy and Zeng, 2022; Hassanein, 2022) but inconsistent with Kravet and Muslu (2013). Moreover, the findings are in line with the discussion in Section 7.4.2.1 that risk disclosure does not affect stock liquidity.

Meanwhile, in Table 7.16, there is a negative association between the net tone of risk disclosure and stock return volatility at the 1% level (coefficient = -0.023,  $t = -3.81$ ). By construction, an increase in the net tone indicates an increase in the relative amount of positive risk information to the amount of negative risk information. The descriptive statistics of risk disclosure in Section 6.2 of Chapter 6 has shown that the net tone of risk information in ASEAN firms' annual reports is altogether more negative than positive. The result in this section suggests that



information asymmetry reduces when the net tone of risk disclosure is less negative. This confirms the evidence discussed in Li et al. (2019) and Elsayed and Elshandidy (2021) that information uncertainty is reduced when risk disclosure contains more positive sentiment relatively to negative sentiment. It can be also inferred that ASEAN firms' managers have incentives to express risks in a positive tone by informing investors of their risk management strategies which help investors better estimate the outcomes of risks and therefore their opinions on firm value are less divergent.

**Table 7.15. Stock market implications of positive and negative risk information**

| Dependent variable                  | Volatility            |           |         |           | BHreturn |           |        |           | ABreturn |           |        |           | Spread |           |        |           |       |
|-------------------------------------|-----------------------|-----------|---------|-----------|----------|-----------|--------|-----------|----------|-----------|--------|-----------|--------|-----------|--------|-----------|-------|
|                                     | Independent variables |           | Coeff.  | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff.   | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    | Coeff. | t-stat    |       |
| Constant                            |                       | 0.306     | 3.7     | 0.236     | 3.32     | 1.366     | 3.86   | 1.458     | 4.35     | 0.527     | 1.58   | 0.563     | 1.80   | 0.111     | 6.73   | 0.110     | 6.93  |
| <b>Risk disclosure tone</b>         |                       |           |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Riskpositive_count                  |                       | -0.013*** | -3.38   |           |          | 0.009     | 0.58   |           |          | 0.002     | 0.12   |           |        | -0.0003   | -0.63  |           |       |
| Risknegative_count                  |                       | 0.019***  | 4.73    |           |          | -0.018*   | -1.71  |           |          | -0.006    | -0.57  |           |        | 0.0003    | 0.70   |           |       |
| Riskpositive_percent                |                       |           |         | -19.319** | -2.08    |           |        | 8.471     | 0.24     |           |        | -8.285    | -0.24  |           |        | -0.771    | -0.51 |
| Risknegative_percent                |                       |           |         | 13.081*** | 5.19     |           |        | -10.416*  | -1.95    |           |        | -2.963    | -0.53  |           |        | 0.029     | 0.14  |
| <b>Market indicators</b>            |                       |           |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Ln_Volume                           |                       | 0.018***  | 10.59   | 0.018***  | 10.56    | 0.092***  | 7.58   | 0.092***  | 7.59     | 0.086***  | 7.86   | 0.086***  | 7.87   | -0.005*** | -8.45  | -0.005*** | -8.46 |
| EP                                  |                       | -0.014    | -1.04   | -0.013    | -0.95    | 0.301**   | 2.54   | 0.299**   | 2.51     | 0.228***  | 2.61   | 0.229***  | 2.60   | -0.004    | -1.00  | -0.004    | -1.01 |
| Beta                                |                       | -0.006    | -1.08   | -0.006    | -0.98    | -0.152*** | -5.81  | -0.153*** | -5.83    | -0.181*** | -7.09  | -0.181*** | -7.06  | -0.002**  | -2.55  | -0.002**  | -2.50 |
| Mvolatility                         |                       | 0.584     | 1.61    | 0.483     | 1.37     | -3.153    | -1.23  | -3.081    | -1.20    | 15.433*** | 6.26   | 15.454*** | 6.26   | -0.141    | -1.37  | -0.141    | -1.38 |
| <b>Ownership structure</b>          |                       |           |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Institution_own                     |                       | -0.079*** | -5.37   | -0.077*** | -5.24    | -0.127*** | -3.00  | -0.129*** | -2.99    | -0.034    | -0.87  | -0.035    | -0.88  | -0.004*   | -1.79  | -0.004*   | -1.82 |
| Foreign_own                         |                       | -0.012    | -0.62   | -0.012    | -0.61    | -0.097    | -1.61  | -0.098    | -1.62    | -0.040    | -0.69  | -0.041    | -0.70  | -0.003    | -1.35  | -0.003    | -1.33 |
| Manager_own                         |                       | 0.008     | 0.32    | 0.006     | 0.25     | -0.025    | -0.23  | -0.024    | -0.22    | -0.052    | -0.52  | -0.052    | -0.52  | 0.007     | 1.04   | 0.007     | 1.03  |
| Government_own                      |                       | 0.050     | 0.87    | 0.043     | 0.78     | -0.144    | -1.33  | -0.139    | -1.29    | -0.121    | -1.17  | -0.119    | -1.15  | -0.001    | -0.29  | -0.001    | -0.29 |
| <b>Company characteristics</b>      |                       |           |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Firmsize                            |                       | 0.005     | 1.09    | 0.005     | 1.09     | -0.060*** | -3.19  | -0.060*** | -3.19    | -0.055*** | -3.33  | -0.055*** | -3.31  | -0.0004   | -0.72  | -0.0004   | -0.70 |
| Growth                              |                       | 0.023***  | 4.41    | 0.022***  | 4.32     | 0.059**   | 2.32   | 0.059**   | 2.35     | 0.028     | 1.19   | 0.029     | 1.20   | 0.001     | 0.93   | 0.001     | 0.92  |
| Liquidity                           |                       | 0.001     | 0.91    | 0.002     | 1.01     | -0.007    | -1.21  | -0.007    | -1.24    | -0.006    | -1.25  | -0.006    | -1.27  | 0.0003    | 0.82   | 0.0003    | 0.82  |
| Leverage                            |                       | -0.004    | -72.00% | -0.004    | -71.00%  | -0.019    | -1.10  | -0.019    | -1.10    | -0.014    | -0.86  | -0.014    | -0.86  | 0.0001    | 0.18   | 0.0001    | 0.17  |
| Profitability                       |                       | 0.015     | 0.41    | 0.008     | 0.23     | 0.248     | 1.59   | 0.253     | 1.61     | 0.243     | 1.64   | 0.244*    | 1.65   | -0.024*** | -3.02  | -0.024*** | -3.01 |
| Reportsize                          |                       | -0.045*** | -5.07   | -0.036*** | -5.05    | -0.208*** | -6.34  | -0.219*** | -7.34    | -0.145*** | -4.66  | -0.149*** | -5.36  | -0.002    | -1.48  | -0.002    | -1.54 |
| <b>Corporate governance factors</b> |                       |           |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Auditor                             |                       | 0.018**   | 1.92    | 0.017*    | 1.89     | 0.080     | 1.60   | 0.081     | 1.61     | 0.072     | 1.53   | 0.072     | 1.53   | 0.0006    | 0.28   | 0.0006    | 0.28  |
| Boardsize                           |                       | 0.002     | 0.68    | 0.001     | 0.61     | -0.015*   | -1.79  | -0.015*   | -1.77    | -0.016**  | -2.05  | -0.016**  | -2.05  | -0.00009  | -0.22  | -0.0001   | -0.23 |
| Independence                        |                       | -0.078**  | -2.12   | -0.075**  | -2.04    | -0.013    | -0.12  | -0.016    | -0.15    | 0.054     | 0.54   | 0.053     | 0.53   | -0.004    | -0.75  | -0.004    | -0.74 |
| Adjusted R-squared                  |                       | 6.41%     |         | 7.50%     |          | 4.65%     |        | 4.67%     |          | 6.42%     |        | 6.42%     |        | 34.43%    |        | 34.46%    |       |
| Year and industry fixed effects     |                       | Yes       |         |           |          |           |        |           |          |           |        |           |        |           |        |           |       |
| Number of observations              |                       | 4,173     |         |           |          | 4,185     |        |           |          | 4,195     |        |           |        |           |        |           |       |
| Number of firms                     |                       | 709       |         |           |          | 710       |        |           |          | 710       |        |           |        |           |        |           |       |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - \beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Riskpositive\_count/Risknegative\_count* is the count of positive/negative words in risk-related sentences in the annual report; *Riskpositive\_percent/Risknegative\_percent* is the percentage of positive/negative words in risk-related sentences in the annual report; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

**Table 7.16. Stock market implications of the net tone of risk disclosure**

| Dependent variable                  | Volatility |        | BHreturn  |        | ABreturn  |        | Spread    |        |
|-------------------------------------|------------|--------|-----------|--------|-----------|--------|-----------|--------|
|                                     | Coeff.     | t-stat | Coeff.    | t-stat | Coeff.    | t-stat | Coeff.    | t-stat |
| Constant                            | 0.289      | 3.77   | 1.308     | 3.85   | 0.445     | 1.40   | 0.111     | 6.73   |
| <b>Risk_tone</b>                    | -0.023***  | -3.81  | 0.024     | 1.24   | 0.012     | 0.62   | -0.001    | -1.02  |
| <b>Market indicators</b>            |            |        |           |        |           |        |           |        |
| Ln_Volume                           | 0.018***   | 10.33  | 0.092***  | 7.37   | 0.086***  | 7.66   | -0.005*** | -8.21  |
| EP                                  | -0.019     | -1.37  | 0.279***  | 2.51   | 0.209***  | 2.54   | -0.004    | -1.02  |
| Beta                                | -0.004     | -0.73  | -0.147*** | -5.49  | -0.174*** | -6.73  | -0.003*** | -2.85  |
| Mvolatility                         | 0.532      | 1.43   | -2.779    | -1.06  | 15.694*** | 6.26   | -0.135    | -1.30  |
| <b>Ownership structure</b>          |            |        |           |        |           |        |           |        |
| Institution_own                     | -0.088***  | -5.70  | -0.117*** | -2.74  | -0.024    | -0.60  | -0.004*   | -1.63  |
| Foreign_own                         | -0.007     | -0.36  | -0.105*   | -1.72  | -0.050    | -0.85  | -0.003    | -1.36  |
| Manager_own                         | 0.007      | 0.28   | -0.00004  | -0.00  | -0.028    | -0.27  | 0.007     | 0.97   |
| Government_own                      | 0.053      | 0.92   | -0.143    | -1.33  | -0.125    | -1.21  | -0.0008   | -0.24  |
| <b>Company characteristics</b>      |            |        |           |        |           |        |           |        |
| Firmsize                            | 0.006***   | 1.20   | -0.058*** | -3.11  | -0.055*** | -3.27  | -0.0003   | -0.66  |
| Growth                              | 0.023      | 4.31   | 0.052**   | 1.98   | 0.023     | 0.93   | 0.001     | 1.06   |
| Liquidity                           | 0.002      | 1.04   | -0.007    | -1.31  | -0.006    | -1.25  | 0.0003    | 0.79   |
| Leverage                            | -0.003     | -0.56  | -0.025    | -1.32  | -0.019    | -1.14  | -0.00006  | -0.09  |
| Profitability                       | 0.024      | 0.65   | 0.269*    | 1.73   | 0.263*    | 1.77   | -0.024*** | -3.00  |
| Reportsize                          | -0.042***  | -5.45  | -0.206*** | -6.84  | -0.139*** | -4.93  | -0.002    | -1.59  |
| <b>Corporate governance factors</b> |            |        |           |        |           |        |           |        |
| Auditor                             | 0.016*     | 1.74   | 0.083     | 1.58   | 0.071     | 1.48   | 0.0005    | 0.24   |
| Boardsize                           | 0.001      | 0.60   | -0.016*   | -1.85  | -0.017**  | -2.13  | -0.00006  | -0.16  |
| Independence                        | -0.071*    | -1.86  | 0.016     | 0.15   | 0.089     | 0.90   | -0.004    | -0.76  |
| Adjusted R-squared                  | 6.19%      |        | 4.67%     |        | 6.42%     |        | 33.98%    |        |
| Year and industry fixed effects     | Yes        |        |           |        |           |        |           |        |
| Number of observations              | 4,080      |        | 4,093     |        | 4,102     |        |           |        |
| Number of firms                     | 708        |        | 709       |        | 709       |        |           |        |

Notes: *BHreturn* is the annual buy-and-hold return; *ABreturn* is the annual abnormal return, calculated as the difference between stock returns and market returns adjusted by stock beta ( $ABreturn_{it} = BHreturn_{it} - Beta_{it} \times Market\ return_{it}$ ); *Volatility* is the standard deviation of stock daily returns; *Spread* is the difference between daily ask and bid prices divided by the average of daily ask and bid prices; *Risk\_tone* is the difference between the number of positive words and the number of negative words divided by the total of positive and negative words in risk-related sentences in the annual report; *Ln\_Volume* is the natural logarithm of the daily average trading volume in million pounds; *EP* is the earnings to share price ratio; *Beta* is stock beta; *Mvolatility* is the standard deviation of market daily returns; *Institution\_own/ Foreign\_own/ Manager\_own/ Government\_own* is the percentage of shares held by institutional investors/ foreign investors/ managers/ government respectively; *Firmsize* is the total assets of firm *i* relative to the country size; *Growth* is the year-on-year percentage change in sales revenue; *Liquidity* is the ratio between current assets and current liabilities; *Leverage* is the ratio between long-term debts and total equity; *Profitability* is the rate of return on total assets; *Reportsize* is the total wordcount of the annual report; *Auditor* is a dummy variable, equals 1 if Big-4 auditor and 0 otherwise; *Boardsize* is the number of board members; *Independence* is the percentage of independent directors in the board; \*\*\* denotes 1% significance level, \*\* denotes 5% significance level and \* denotes 10% significance level.

## 7.5. Summary

In this chapter, regression results for the stock market implications of disclosure provided by ASEAN listed firms have been reported and discussed. Table 7.17 below summarises the findings in this chapter.

**Table 7.17. Summary of the findings for the stock market implications of forward-looking and risk disclosure**

|    | Hypothesis  | Expected sign | Result   |
|----|---|---------------|----------|
| 5a | There is a positive association between forward-looking disclosure and stock returns                    | +             | Accepted |
| 5b | There is a positive association between positive forward-looking disclosure and stock returns           | +             | Accepted |
| 5c | There is a negative association between negative forward-looking disclosure and stock returns           | -             | Rejected |
| 6a | There is an association between risk disclosure and stock returns                                       | ?             | Rejected |
| 6b | There is a positive association between positive risk disclosure and stock returns                      | +             | Rejected |
| 6c | There is a negative association between negative risk disclosure and stock returns                      | -             | Rejected |
| 7a | There is a negative association between forward-looking disclosure and stock return volatility          | -             | Accepted |
| 7b | There is a negative association between positive forward-looking disclosure and stock return volatility | -             | Rejected |
| 7c | There is a positive association between negative forward-looking disclosure and stock return volatility | +             | Rejected |
| 8a | There is an association between risk disclosure and stock return volatility                             | ?             | Accepted |
| 8b | There is a negative association between positive risk disclosure and stock return volatility            | -             | Accepted |
| 8c | There is a positive association between negative risk disclosure and stock return volatility            | +             | Accepted |
| 9  | There is a positive association between forward-looking disclosure and stock liquidity                  | +             | Rejected |
| 10 | There is a positive association between risk disclosure and stock liquidity                             | +             | Rejected |

The results show that forward-looking disclosure is more value-relevant than risk disclosure in ASEAN countries. The overall level of forward-looking disclosure reduces stock return volatility and improves stock returns, suggesting that this information content is incorporated in investors' stock valuations as it assists them in estimating firm fundamentals. Among the forward-looking themes, investors react more strongly to strategy-related information which helps them understand how a company's future strategies and plans contribute to its value creation. The topics of financial performance and corporate environment, meanwhile, affect stock return volatility. There is further evidence that the positive tone and net tone of forward-looking disclosure improve stock returns and stock liquidity. Concerning risk disclosure, the strongest effect is on stock return volatility. Investors are more

likely to react to the tone of risk disclosure rather than the time horizon and quantification of risk information. The results indicate that positive risk information reduces investors' uncertainty in their predictions of firm value while negative risk information tends to amplify investors' panic and increase their irrational investment behaviour. In the following chapter, the thesis summarises the findings reported in empirical chapters and draws final conclusions for the research questions. Research limitations and recommendations for future research are also discussed in the next chapter.

## **CHAPTER 8: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH**

### **8.1. Introduction**

Motivated by investigating the effect of ownership structure on the disclosure levels exhibited by ASEAN listed firm, this thesis is conducted to achieve three objectives. The first objective is to examine the extent to which listed firms in six ASEAN member countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam) disclose forward-looking and risk information in the narrative section of their annual reports. The second objective is to investigate the association between ownership structure, as proxied by four types of owners (institutions, foreign investors, managers, government), and the extent of forward-looking and risk disclosure in ASEAN listed firms. The third objective is to discover stock market implications of forward-looking and risk disclosure in ASEAN countries. This chapter summarises the main findings of the study. Particularly, Section 8.2 summarises the salient findings of the thesis. Section 8.3 presents the implications of the findings to different types of information users. Section 8.4 discusses the contributions of the thesis to the research literature. Section 8.5 highlights the limitations of the study. Finally, Section 8.6 provides recommendations for further research.

### **8.2. Summary of findings**

*Question 1: To what extent do ASEAN country listed companies disclose forward-looking and risk information?*

As the focus of the thesis is on the two contents of corporate disclosure, forward-looking and risk information, an automated content analysis is conducted using the QSR NVivo 12 software. The extent of disclosure is measured by counting the frequency of sentences (words) in annual report narratives issued by ASEAN listed firms. This requires the employment of different wordlists which are obtained from a comprehensive review of previous studies in forward-looking and risk disclosure. Namely, the thesis chooses the forward-looking wordlist proposed by Hussainey et

al. (2003) and the risk-related wordlist proposed by Elshandidy et al. (2013). To obtain an insight into ASEAN firms' reporting practice, the thesis extends the analysis to examine the themes of forward-looking disclosure while two risk content dimensions, time horizon and quantification, are employed to examine the quality of risk disclosure. The analysis also measures the tone of forward-looking and risk disclosure using the sentiment wordlist developed in Loughran and McDonald (2011) because the extant literature suggests that investors are attentive to the tone employed by managers in annual report narratives. The analysis also distinguishes the absolute and relative levels of disclosure to further investigate how they affect investors' interpretations of information.

In summary, the content analysis results in a set of 14 disclosure variables including: the count/ percentage of forward-looking sentences in the annual report, the count/ percentage of financial/ strategy-related/ structure-related/corporate environmental words in forward-looking sentences, the count/percentage of positive/ negative words in forward-looking sentences, the net tone of forward-looking sentences, the count/ percentage of risk-related sentences in the annual report, the count/ percentage of forward-looking/ quantitative words in risk-related sentences, the count/ percentage of the positive/ negative words in risk-related sentences, the net tone of risk-related sentences.

The results suggest that the level of forward-looking and risk information in annual report narratives of ASEAN listed firms is generally low. Firms are more likely to use forward-looking disclosures to complement financial statements or discuss expected changes in the external environment which potentially affect their future performance. Meanwhile, firms avoid discussing about forward-looking strategy-related and structure-related information which is associated with high proprietary costs. When communicating forward-looking information, ASEAN firms tend to emphasize the optimistic sentiment to impress information users of their prospects. Meanwhile, ASEAN firms' risk disclosures mainly contain non time-specific and backward-looking information. Compared to future-related risk information, the amount of quantitative risk information is more available. The dominant negative tone of risk disclosure implies that listed firms in ASEAN countries communicate more unfavourable than favourable risk news in their annual reports.

*Question 2: How does the level of forward-looking and risk information in annual report narratives vary with ownership types in ASEAN listed companies?*

*The impact of ownership structure on the extent of forward-looking disclosure*

Regression results show that ownership structure is significant in explaining the variations in forward-looking disclosure levels among ASEAN listed firms. Among the four ownership types, the role played by institutional and foreign shareholders is stronger. Moreover, the ownership types are more likely to influence the absolute level than the relative level of forward-looking disclosure.

There is a U-shaped relationship between institutional ownership and forward-looking disclosure, implying that there is a turning point of institutional ownership at which forward-looking disclosure reaches its minimum. These results can be explained by different investment strategies adopted by this type of investor in ASEAN countries. Institutional investors with a short-term investment vision are likely to hold small shares and prioritise immediate returns over corporate management while those with a long-term strategy tend to obtain influential shareholdings and have more incentives to monitor managers' disclosure behaviour.

In opposite, an inverted U-shaped association is reported between foreign ownership and the extent of forward-looking information, suggesting that there is a turning point of foreign ownership at which disclosure is at its maximum level. This result derives from the diversifying background of foreign investors in ASEAN countries. Foreign investors coming from developed markets such as the US, the UK, Europe and East Asia have the incentive to enhance corporate disclosure as they are more familiar with international reporting standards and face greater litigation costs in the host ASEAN countries. However, large foreign shareholdings of ASEAN firms are mainly in the hands of investors from other emerging Asian economies and intra-regional investors who aim at lower tax expenses associated with offshore investments and pay less attention to corporate disclosure practice. Moreover, compared to investors from other origins, these investors are more familiar with local business protocols, so they face less information risks.



In addition, government ownership has a negative impact on forward-looking disclosure, implying that ASEAN firms with government ownership are less likely to provide forward-looking information. The pursuit of non-profit goals in these firms may give rise to the conflict of interest between the government and other shareholders. The result also implies that the privatization of SOEs in ASEAN countries does not encourage the communication of future-oriented information which is useful for investors' decision-making. Meanwhile, there is no significant association between managerial ownership and forward-looking information.

Regarding the themes of forward-looking disclosure, institutional ownership is positively associated with strategy-related and corporate environmental forward-looking information but negatively associated with financial forward-looking information. Meanwhile, there is supporting evidence that foreign ownership has an inverted U-shaped relationship with the topics of corporate structure and corporate environment. Collectively, the results indicate that institutional and foreign shareholders influence managers' propensity for non-financial forward-looking disclosure in annual reports. These types of owners may rely on other specialised reports for financial information. The nonlinearity between foreign ownership and forward-looking themes confirms that foreign investors adopt different investment strategies that affect their ability and incentive to monitor managers' disclosure decisions. There is additional evidence that government ownership leads to lower levels of forward-looking information in the topics of corporate structure and financial performance.

On the other hand, there is a further U-shaped association between institutional ownership and the positive tone and net tone of forward-looking disclosure, indicating that institutional shareholders strongly influence managers' propensity for releasing favourable future news. The U-shaped represents the conflicting incentives between short-term and long-term institutional shareholders when investing in ASEAN firms. A similar result is reported for managerial ownership, indicating that managers have more incentives to impress other shareholders by increasing the amount of positive information in their forward-looking statements when holding a sufficient share. Meanwhile, an inverted U-shaped relationship is observed between foreign ownership (government ownership) and negative future

news. This means large shareholdings by foreign investors and the government induce firms to disseminate bad news to inform investors of their anticipated adverse changes in the future.

*The impact of ownership structure on the extent of risk disclosure*

Compared to the results for forward-looking disclosure, the impact of ownership structure on the extent of risk disclosure is less significant. It is consistent with the results for forward-looking disclosure that more significant results are observed when risk disclosure is measured in absolute terms.

A weak and positive association suggests that firms with institutional ownership are more likely to exhibit greater levels of risk disclosure. Institutional shareholders may perceive risk information as a crucial content that should be discussed in annual reports. Like forward-looking disclosure, an inverted U-shaped effect is also observed between foreign ownership and risk disclosure, confirming that foreign investors' monitoring incentive is driven by their investment visions.

In contrast, there is a U-shaped relationship between managerial ownership and risk disclosure, indicating the existence of both entrenchment and alignment effects. While managers tend to entrench at low levels of shareholdings, they are more likely to disclose risk information when their shareholdings are large enough. A similar pattern is reported for the impact of government ownership on the level of risk disclosure, implying different roles played by ASEAN governments in shaping the corporate informational environment. The government in ASEAN developing countries is associated with management inefficiency and low accountability whereas the government in ASEAN developed countries plays a more active role in promoting corporate transparency.

The results further show that firms with institutional ownership are sensitive to the release of negative risk news while firms with foreign ownership are more influenced by the cost-benefit trade-off when disclosing risk information, implied by an inverted U-shaped. Additionally, these two types of shareholders may rely on other sources of risk disclosure rather than the annual report, leading to an overall downward effect at high levels of shareholdings. An inverted U-shaped association is also reported for managerial ownership and the net tone of risk disclosure.

Managers have more incentives to provide unfavourable risk news when their ownership is sufficient to align their interests and those of shareholders.

Ownership is less significant in determining the qualitative dimensions of risk disclosure, including the time horizon and the quantification of risk information. Among the four ownership types, the study only observes significant results for the negative impact of institutional ownership on the two attributes. The greater level of risk disclosure induced by institutional shareholders, as discussed above, is not associated with higher specificity in risk information.

*Question 3: How does the stock market reacts to forward-looking and risk information in annual report narratives provided by ASEAN listed companies?*

The thesis employs four measures for stock market consequences of disclosure by ASEAN listed firms, namely buy-and-hold stock returns, abnormal returns, stock return volatility and stock liquidity. In summary, forward-looking and risk disclosures influence stock returns and stock volatility to a large extent while having a negligible effect on stock liquidity.

There is strong evidence that both forward-looking and risk disclosures reduce the volatility of stock returns, suggesting that these types of information help investors better estimate firm value and therefore their predictions of firm value are less diverging. Additionally, firms with high forward-looking disclosure provide higher stock returns than those with low forward-looking disclosure and such returns are better than the market average, as observed via abnormal returns. This finding implies that forward-looking information disclosed by ASEAN listed firms reduces investors' uncertainty and consequently increases their cash flow projections and reduces their risk premiums. This effect is, however, not observed for the overall level of risk disclosure.

The thesis provides a further insight into the stock market consequences of disclosure content dimensions and qualitative characteristics. The results indicate that non-financial forward-looking information disclosed by ASEAN listed firms is more useful for investors than financial information. While investors can extract future-related financial information from other sources of corporate communication, they are likely to rely on annual reports for future information about business

strategies and external environment. Meanwhile, this study does not find significant stock market effects of forward-looking and quantitative risk information.

When the tone of disclosure is considered, investors' reactions to risk information are stronger than forward-looking information. There is weak evidence that the provision of positive forward-looking information leads to higher stock returns. Meanwhile, the stock market values both positive and negative risk news. As risk disclosure is likely to bring panic to investors, this study finds that positive risk information tends to appease investors' panic and therefore enhance their confidence in trading. In opposite, investors reduce their estimations of future cash flows or increase risk premiums following the disclosure of negative risk information as they are more uncertain about the disclosing firm's fundamentals.

### **8.3. Implications of the findings**

The thesis focuses on the level of corporate disclosure in annual report narratives rather than mandatory financial reporting. As the narrative section of the annual report is subject to managerial discretion, the findings of this thesis can help to explain managers' incentives for disclosure in ASEAN countries. The thesis particularly focuses on two contents of disclosure, forward-looking and risk, which are suggested in prior studies as being useful for investors' decision-making. From a theoretical viewpoint, the findings suggest that managers' incentives for the two disclosure contents can be explained by a multi-theoretical approach. On one hand, managers have the incentive to provide more information to reduce agency costs and litigation costs or to signal their management expertise. On the other hand, their disclosure decisions are restrained by proprietary costs and the power of other shareholders who obtain influential shareholdings. In addition, by looking at different dimensions of disclosure, the thesis provides an insight into the disclosure practice among ASEAN listed firms. This will be of interest of different information users such as policymakers, stock market investors, academic researchers and analysts.

This study has important implications for regulators in ASEAN countries in their efforts to enhance the quality of corporate reporting and hence the stock market transparency. While institutional ownership is large in most Western and East

Asian developed markets, it is much less common in ASEAN country members. The results indicate that the U-shaped association between institutional ownership and both contents of disclosure is strongly significant, suggesting that institutional investors encourage firms to improve their disclosure practice at high levels of shareholdings. As this type of investor tends to choose markets with a good level of transparency, good quality of regulatory enforcement and strong investor protection, the regulators in ASEAN countries should find ways to strengthen their regulatory framework and thereby attract more equity investments from institutions worldwide. These investors, with a long-term investment vision, would pay more attention to monitoring managerial behaviour and consequently strengthen corporate governance in ASEAN listed firms.

Another unique feature of ownership structure in ASEAN listed firms is the active involvement of the government. By initiating the privatisation of SOEs in early 1990s, the ASEAN governments aim at promoting corporate management efficiency and thereby improving corporate transparency and accountability. However, the overall negative result in this study indicates that firms with government ownership exhibit low levels of disclosure. The financial support provided by the government reduces the incentive in these firms for public disclosure. This subsequently prevents public investors from investing in government-owned firms. The government should find ways to harmonise the pursuit of socio-economic objectives with the protection of other shareholders' wealth to reduce the conflict of interests between itself and private investors. Moreover, the ASEAN governments should make stronger efforts on combating corruption which is the root cause behind unethical behaviour of managers who are commonly appointed by the government in their investee firms.

While foreign investment in ASEAN countries has been growing rapidly in the most recent decade (UNCTAD, 2021), foreign ownership in ASEAN listed firms is not high. Foreign portfolio investments in the ASEAN are significantly made by investors from other Asian countries such as Hong Kong, Japan, Korea and China or from intra-regional investors such as Singapore and Malaysia while another remarkable amount is made through the channel of cross-border M&A. The inverted U-shaped relationship between foreign ownership and both contents of

disclosure indicate that the motivation for disclosure is only observed in firms with low foreign ownership whereas large foreign shareholdings discourage firms to communicate value-relevant information. As large foreign investors aim at low production costs and low tax expenses in the host ASEAN countries, they tend to pay less attention to corporate transparency. The ASEAN regulators should consider conditional investment incentives and tax allowances to attract foreign portfolio diversification projects and simultaneously encourage the disclosure of useful information in the investee firms.

Among the ownership types, managerial ownership plays a trivial role in determining the level of forward-looking and risk disclosure in ASEAN listed firms. Given the low levels of managerial shareholdings in the region, this type of ownership has limited influence on the public availability of information. As the agency theory suggests that sufficient managerial shareholdings would create an interest alignment effect, this study suggests that shareholders of ASEAN listed firms may consider increasing stock-based incentives to promote managers' disclosure practice.

The findings of this thesis also have important implications for listed companies, stock market investors and financial analysts in ASEAN countries. The significant results suggest that both forward-looking and risk disclosures by ASEAN listed firms are value relevant. Both types of disclosure content are useful in reducing the volatility of stock returns while forward-looking information influences stock returns to a larger extent. The provision of such information reduces information asymmetry and subsequently enhances the effectiveness of investors' decision-making.

The results provide suggestions for ASEAN listed firms in their efforts to improve the usefulness of annual report disclosure to ultimate users. The economic benefits of forward-looking and risk disclosure are observed, as measured by stock returns. Among the themes of forward-looking disclosure, investors are more likely to incorporate strategy-related and corporate environmental information in their stock pricing process. While ASEAN firms generally provide more forward-looking information about financial performance in annual report narratives than other

topics, investors tend to look for non-financial future-related information in ASEAN firms' annual reports rather than financial information. To improve the relevance of corporate reporting, ASEAN firms should consider providing more information about their future strategies, policies and development plans which assist investors in identifying key drivers of future performance and thereby estimating firm value more accurately.

On the other hand, the results indicate that the overall level of risk disclosure and the two qualitative attributes of risk disclosure, the time horizon and quantification, are not considered by investors in decision-making. This suggests that ASEAN firms should pay more attention to enhance the relevance and verifiability of risk information to help investors understand their underlying risks. Meanwhile, the significant stock market reactions to the tone of risk disclosure indicate that investors are attentive to managers' qualitative discussion about risks. The provision of both positive and negative risk information affects stock returns and stock volatility. The neutrality of risk discussion might imply managers' incentives to withhold or disguise unfavourable risk information. From the policy-making viewpoint, the development of disclosure regulations and guidelines would be beneficial for firms to improve the quality of their public communication.

However, the provision of forward-looking and risk information in ASEAN listed firms have no significant impact on stock liquidity. This means the liquidity providers, with influential shareholdings, in ASEAN stock markets do not rely on corporate disclosure in annual reports to initiate trading activities. The superior access to corporate information may give rise to the benefits obtained by large shareholders at the expense of minority shareholders' wealth. Regulators in ASEAN countries should look for solutions to strengthen the legal protection of minority shareholders and enhance the availability of corporate communication channels so that individual investors have better access to information.

#### **8.4. Limitations of the study**

Although this thesis provides many useful insights into the disclosure practice of ASEAN listed companies, they do not come without limitations. The content

analysis only measures the level of disclosure in English annual reports while local languages are used more commonly in corporate reporting in several ASEAN countries. The English version of the annual report might be subject to translation errors or might not completely convey the messages sent by firms. Moreover, the limited availability of English annual reports in the ASEAN developing nations, such as Philippines and Vietnam, leads to an imbalance in the number of companies for each country in the sample.

Another limitation of the study derives from the variety in the format and presentation of the annual report used by ASEAN listed firms. While a significant number of firms in Thailand and Indonesia prepare a bilingual report, firms in Vietnam commonly translate the report written in their local language to English, which potentially impairs the quality of the report. This creates extra work to manually check the textual content in annual reports before conducting the content analysis in QSR NVivo 12. It is also noteworthy that the automated approach, based on the frequency of word occurrences, limits the dimensions of disclosure that the content analysis can capture. As disclosure is an abstract and multi-faceted construct, a manual approach would give a more comprehensive and holistic view of corporate textual reporting. Nevertheless, this thesis overcomes the inherent weakness of the manual approach to reach a large sample size and therefore better account for industry and country differences.

The thesis is restricted to publicly listed companies on the ASEAN stock exchanges and does not take into account the reporting practice of non-listed firms. The conclusions drawn from this study are also not applicable to financial firms as they are subject to different regulations from those applied to non-financial companies. Although these limitations reduce the generalisability of the results to a certain extent, there are clear advantages of this approach. Corporate reporting is more available and verifiable through academic research databases, stock exchange databases and company websites. Moreover, the reporting practice of listed companies is of primary interest of market participants such as current and potential investors, brokerage, financial analysts and other important stakeholders such as banks and the governments.



Prior disclosure research has pointed out that other board characteristics such as expertise, meeting frequency, gender, and audit committee characteristics such as committee size and composition affect corporate disclosure levels to a certain extent. However, only few corporate governance factors are considered as control variables in the regression analysis due to the low availability of corporate governance information for ASEAN listed firms. Additionally, the thesis has not yet considered other country factors that potentially affect corporate reporting practice such as politics, culture and religion. Including these variables would enhance the understanding of reporting practice in a dynamic and diverse region like the ASEAN.

### **8.5. Recommendations for future research**

As prior disclosure studies that apply the content analysis of corporate textual reporting are mainly focused on Western developed markets, this thesis contributes to the existing knowledge of corporate reporting practice in the developing region of ASEAN countries. The findings of this thesis encourage future research to extend the analysis to other country settings. Comparative research between developed and developing Asian economies or between the ASEAN country members and other emerging country groups would provide an insightful view of corporate disclosure in Asia which remain under-discovered in the existing literature.

Additionally, the findings of this thesis reveal that corporate ownership is a significant determining factor of the extent of corporate disclosure. Future research may be conducted by considering the interactions among owners with different investment strategies or classifying the ownership types employed in this thesis into subcategories. For example, foreign investors can be divided into foreign institutions, foreign individuals and foreign governments. Meanwhile, institutions can be classified into short-term and long-term investors. These investors may have different motives when holding shares in companies and therefore affect managers' disclosure decisions in different ways. Furthermore, it would be interesting to further investigate corporate disclosure in politically connected

companies in which the government may not directly hold shares but has the ability and power to influence the decision-making to a certain extent.

Future studies may look at other reporting documents to discover more about the level of disclosure in ASEAN country members. Given the recent developments in reporting regulations and practice in ASEAN countries, one can expect that corporate communication will be more available under different reporting forms apart from the annual report. The availability of other reporting channels on a more frequent basis would enhance the analysis of the value relevance of corporate disclosure.

While this study has shown that forward-looking and risk information is useful for investors' decision-making, future research can extend to analyse other information contents of corporate reporting that are also of investors' interests such as corporate social responsibility, environmental issues and corporate sustainability practice. The analysis of these topics remains limited under the context of developing economies and in particular the ASEAN region.

Regarding the measurement of textual disclosure, future research may consider the application of machine learning or programming language systems such as R and Python to enhance the analysis of the linguistic components of managers' qualitative discussions. By doing so, the content analysis would achieve a better understanding of managers' incentives for disclosure or their propensity for impression management.

The interaction between mandatory and voluntary disclosure would also be of future research interests. Prior studies show that voluntary disclosure can be either substitutive or complementary to mandatory disclosure. There is no consensus on this interaction in the existing literature in developed markets and the research problem remains an open question in developing economies.

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## APPENDICES

### Appendix A. The list of forward-looking keywords developed

"accelerate", "anticipate", "is anticipated", "await", "coming year", "coming financial year", "coming years", "coming financial years", "coming months", "confidence", "confident", "convince", "current financial year", "financial year envisage", "estimate", "is estimated", "are estimated", "eventual", "expect", "expects", "is expected", "are expected", "forecast", "forecasts", "is forecast", "are forecast", "forthcoming", "hope", "hopes", "intend", "intends", "intention", "likely", "unlikely", "look forward", "looks forward", "is looking forward", "are looking forward", "look ahead", "next", "novel", "optimistic", "outlook", "planned", "planning", "predict", "is predicted", "are predicted", "prospect", "prospects", "remain", "remains", "renew", "renews", "scope for", "scope to", "shall", "shortly", "should", "soon", "will", "well placed", "well positioned", "years ahead", "year ahead", "2010", "2011", "2012", "2013", "2014", "2015", "2016", "2017", "2018", "2019", "2020", "2025", "2030", "2035".

*Note: Conjugations of words are included, except the past tense. The year numbers are changed each year to include only future years in the word searches.*

### Appendix B. The list of forward-looking themes

#### B1. Financial words

"earnings", "revenue", "sales", "turnover", "cash", "debt", "loan", "leverage", "cost", "charge", "backlog", "return", "outcome", "income", "profit", "contribution", "investment", "assets", "saving", "benefit", "dividend", "expenditure", "expense", "payment", "tax", "liability", "obligation", "losses", "margin", "equity", "liquidity", "fund", "depreciation", "research and development", "R&D", "ROIC", "ROCE", "ROE", "ROA", "EPS"

#### B2. Strategy-related words

"mission", "vision", "strategy", "policy", "goal", "proposal", "target", "program", "plan", "objective"

### **B3. Structure-related words**

"expansion", "development", "modification", "improvement", "product", "invention", "growth", "progress", "challenge", "acquisition", "merger", "takeover", "market share"

### **B4. Corporate environment-related words**

"legal", "regulation", "law", "environment", "rule", "politics", "social", "economical", "industry", "technology", "competition", "risk", "uncertainty", "market", "trade", "demand", "inflation", "interest rate", "service", "trend", "employee", "leadership", "oil price", "recession", "raw material"

## **Appendix C. The list of risk-related keywords**

risk\*, loss\*, decline (declined), decrease, (decreased), less, low\*, fail (failure), threat, verse (versed; reverse; reversed), viable, against, catastrophe (catastrophic), shortage, unable, challenge (challenges), uncertain (uncertainty; uncertainties), gain (gains), chance (chances), increase (increased), peak (peaked), fluctuate\*, differ\*, diversify\*, probable\* and significant\*.

*Note: Words denoted by \* reflects the derivatives of the root words.*

## **Appendix D. The list of quantitative words**

"billion", "dozen", "eight", "eighteen", "eighteenth", "eighth", "eighty", "eleven", "fifteen", "fifteenth", "fifty", "final", "first", "five", "follow", "former", "forty", "four", "fourteen", "half", "hundred", "last", "million", "next", "nine", "nineteen", "ninety", "one", "prior", "quarter", "second", "seven", "seventeen", "seventy", "six", "sixty", "sixteen", "subsequent", "ten", "third", "thirteen", "thirty", "thousand", "three", "trillion", "twelve", "twenty", "two", "zero", "%", "\$", "USD".

*Note: The local currency is included in the searches for each country: Indonesia (Rupiah, Rp), Malaysia (Ringgit, MYR), Philippines (Peso, PHP), Singapore (S\$), Thailand (baht, THB), Vietnam (dong, VND).*

## Appendix E. Examples of text search query results extracted from QSR NVivo 12

### Appendix E1. Examples of forward-looking sentences

| Company name      | Country     | Year of annual report | Search query results extracted from QSR NVivo 12   |
|-------------------|-------------|-----------------------|--|
| Pantech Group     | Malaysia    | 2014                  | "Going forward in FY2015, the Group is looking forward to an increased positive contribution from PSA which turned black in FY2014."   |
| White Horse       | Malaysia    | 2014                  | "Malaysia's economy is expected to grow 999 to 999 percent this year as strong domestic demand and resilient exports will anchor growth, although the risks of declining oil prices affecting its outlook linger."   |
| Action Asia       | Singapore   | 2013                  | "The Group has plans to introduce some new lifestyle products and smart mobile devices in the coming months."  |
| Cosco Shipping    | Singapore   | 2013                  | "It is also very encouraging to note that the IEA (International Energy Agency) has in its Oil Market report for January 2014 expected world oil consumption to increase by 999 mb/d (million barrels per day) in 2014, from the 999 mb/d in 2013 in a scenario where the industrialised economies are expected to continue to recover." |
| Kalbe Farma       | Indonesia   | 2016                  | "Supply chain projects implemented in 2016 will continue with extensive rollouts in 2017 and new projects will start next year to continue improving the performance and efficiency of the Company's entire supply chain."   |
| Surya Citra Media | Indonesia   | 2016                  | "The Company estimates that it will grow revenues more than the growth in overall FTA TV advertising spend in 2017 which is estimated at 999% by MPA."   |
| Belle Corp        | Philippines | 2011                  | "We broke ground in January 2010, and expect to complete and launch the entire complex in 2013."   |

## Appendix E1. Continued

|                                |             |      |  |
|--------------------------------|-------------|------|--|
| Nickel Asia Corp               | Philippines | 2011 | "The stoppage will, however, set back the timetable for completion of the project and the start of commercial operations, which is expected towards the latter part of 2013."                                  |
| Pico Thailand Pcl              | Thailand    | 2015 | "It is expected that related transactions such as sales and trade receivables and purchases and trade payables will continue as normal trade engagements."   |
| Thai Airways International Pcl | Thailand    | 2015 | "By mid-2016, the Company will have put in place a comprehensive information and technology system that will rival that of the leading competitors as well as greatly improve the way we serve our customers." |
| DHG Pharma                     | Vietnam     | 2012 | "This is cost of sales ratio will remain high for "pull an advantage of DHG in a fiercely competitive strategy" will continue to be applied in 2013."  |
| Masan Group                    | Vietnam     | 2012 | " Given these supportive reasons, Masan Group expects to grow our earnings by 30% to 70% in 2013, getting us closer to our goal of achieving uS\$1 billion in consolidated EBITDA within two to three years."  |

## Appendix E2. Examples of risk-related sentences

| Company name          | Country     | Year of annual report | Search query results extracted from QSR NVivo 12   |
|-----------------------|-------------|-----------------------|--|
| Cosco Capital Inc     | Philippines | 2014                  | "The income decline was due mainly to the protracted shutdown of its Power Unit 2 and significant losses on replacement power purchases."  |
| Nickel Asia Corp      | Philippines | 2014                  | "Thirdly, our reserves may not be replaced, and failure to identify, acquire and develop additional reserves would be detrimental to growth."  |
| Kmi Wire and Cable    | Indonesia   | 2011                  | "The export market was continuously on the decline since 2008, but the value of export this year started to increase, although the increase was still insignificant."  |
| Media Nusantara Citra | Indonesia   | 2011                  | ""Low coverage distribution", the risk that comes from failure or lack of distribution of products to consumers."  |
| Ahmad Zaki Resources  | Malaysia    | 2013                  | "The Oil & Gas Division saw its revenue affected by the increasing congestion at Kemaman Supply Base which saw its direct bunkering sales decrease."   |
| Berjaya Land          | Malaysia    | 2013                  | "This coupled with the increase in new room supply in the saturated Hanoi market had affected the performance of Sheraton Hanoi and InterContinental Hanoi."   |
| KS Energy             | Singapore   | 2015                  | "As a result, FY2015 was a challenging year and the operating environment for our Group changed significantly, as it did for all industry players, and we had to adapt to a prolonged period of falling oil prices."                                   |
| Lian Beng Group       | Singapore   | 2015                  | "The decrease was mainly due to a decrease in the sales volume of ready mixed concrete and the highly competitive selling price."  |
| A.J.Plast             | Thailand    | 2017                  | "The company has made a forward exchange contract with domestic financial institutes to prevent risks from volatile foreign exchange that may cause an impact by receiving less Thai currency from export sales or payment to foreign creditors."      |
| AI Energy             | Thailand    | 2017                  | "The consequence of declining of CPO price dramatically and continuously is the average cost of sales during Quarter 1 and 2 for Year 2017 is higher than market price, while the quantity of product sold is slightly less than previous year by 5%." |

## Appendix E2. Continued

|           |         |      |  |
|-----------|---------|------|--|
| Duc Thanh | Vietnam | 2016 | "Beside economy's general difficulties, the company has also faced with many challenges because the revenue plan is high, the company's scale is growing, workforce and the scale of production have to be increased accordingly, the domestic business must make a breakthrough." |
| FPT Corp  | Vietnam | 2016 | "It has continued to be in the low range since 2007, reflecting the challenges facing economic growth."  |

**Appendix F. QSR NVivo results and the manual content analysis results on 20 randomly selected ASEAN firms' annual reports**

**Appendix F1. The results for forward-looking disclosure variables**

| Company                | Country     | Year of report | Forlook _count |        | Financial _count |        | Strategy _count |        | Structure _count |        | Corenvi _count |        | Forlookpositive _count |        | Forlooknegative _count |        |
|------------------------|-------------|----------------|----------------|--------|------------------|--------|-----------------|--------|------------------|--------|----------------|--------|------------------------|--------|------------------------|--------|
|                        |             |                | Nvivo          | Manual | Nvivo            | Manual | Nvivo           | Manual | Nvivo            | Manual | Nvivo          | Manual | Nvivo                  | Manual | Nvivo                  | Manual |
| AKR Corporindo         | Indonesia   | 2009           | 59             | 59     | 11               | 9      | 13              | 10     | 18               | 14     | 9              | 8      | 31                     | 28     | 1                      | 1      |
| Ahmad Zaki Resources   | Malaysia    | 2013           | 42             | 42     | 3                | 2      | 4               | 4      | 3                | 2      | 8              | 8      | 14                     | 13     | 4                      | 6      |
| Bangchak               | Thailand    | 2011           | 90             | 98     | 14               | 13     | 16              | 16     | 16               | 15     | 23             | 21     | 26                     | 28     | 17                     | 19     |
| Mandarin Oriental      | Singapore   | 2017           | 60             | 59     | 15               | 15     | 2               | 0      | 8                | 7      | 3              | 3      | 14                     | 14     | 8                      | 11     |
| Belle Corp             | Philippines | 2013           | 36             | 35     | 1                | 1      | 1               | 1      | 2                | 3      | 2              | 2      | 17                     | 18     | 1                      | 1      |
| Berjaya                | Malaysia    | 2015           | 82             | 79     | 20               | 19     | 10              | 8      | 19               | 20     | 36             | 34     | 37                     | 38     | 19                     | 17     |
| Hutchison              | Singapore   | 2016           | 62             | 63     | 9                | 10     | 7               | 7      | 8                | 7      | 23             | 25     | 38                     | 39     | 18                     | 19     |
| Duc Thanh              | Vietnam     | 2015           | 22             | 20     | 4                | 2      | 8               | 10     | 11               | 5      | 2              | 0      | 14                     | 14     | 4                      | 3      |
| Gajah Tunggal          | Indonesia   | 2014           | 91             | 90     | 25               | 29     | 12              | 12     | 20               | 20     | 31             | 33     | 50                     | 57     | 18                     | 21     |
| Cal-comp               | Thailand    | 2011           | 35             | 39     | 10               | 10     | 2               | 2      | 7                | 8      | 19             | 21     | 18                     | 19     | 12                     | 13     |
| CWT                    | Singapore   | 2012           | 39             | 41     | 4                | 3      | 2               | 1      | 3                | 2      | 11             | 11     | 11                     | 10     | 2                      | 4      |
| HAGL                   | Vietnam     | 2015           | 50             | 51     | 9                | 9      | 6               | 6      | 4                | 5      | 7              | 7      | 17                     | 18     | 4                      | 6      |
| First Phil             | Philippines | 2013           | 40             | 40     | 4                | 5      | 2               | 1      | 6                | 6      | 4              | 3      | 7                      | 7      | 7                      | 6      |
| IOI                    | Malaysia    | 2012           | 52             | 50     | 7                | 7      | 5               | 5      | 9                | 8      | 19             | 18     | 18                     | 17     | 9                      | 9      |
| Fajar Surya            | Indonesia   | 2009           | 53             | 55     | 12               | 11     | 3               | 2      | 5                | 6      | 16             | 16     | 21                     | 21     | 5                      | 6      |
| Lautan Luas            | Indonesia   | 2010           | 15             | 14     | 6                | 7      | 2               | 2      | 3                | 3      | 6              | 6      | 8                      | 9      | 4                      | 4      |
| Hartalega              | Malaysia    | 2010           | 26             | 26     | 6                | 6      | 1               | 0      | 13               | 13     | 6              | 6      | 13                     | 14     | 4                      | 4      |
| PanUnited              | Singapore   | 2009           | 53             | 57     | 3                | 3      | 3               | 2      | 4                | 2      | 12             | 12     | 20                     | 22     | 11                     | 18     |
| Thai Central Chemicals | Thailand    | 2014           | 47             | 47     | 7                | 9      | 7               | 7      | 10               | 11     | 22             | 23     | 12                     | 12     | 20                     | 17     |



**Appendix F2. The results for risk disclosure variables**

| Company                | Country     | Year of report | Risk_count |        | Riskforwlook_count |        | Riskquan_count |        | Riskpositive_count |        | Risknegative_count |        |
|------------------------|-------------|----------------|------------|--------|--------------------|--------|----------------|--------|--------------------|--------|--------------------|--------|
|                        |             |                | NVivo      | Manual | NVivo              | Manual | NVivo          | Manual | NVivo              | Manual | NVivo              | Manual |
| AKR Corporindo         | Indonesia   | 2009           | 70         | 78     | 7                  | 7      | 19             | 34     | 5                  | 7      | 8                  | 3      |
| Ahmad Zaki Resources   | Malaysia    | 2013           | 24         | 27     | 3                  | 3      | 16             | 15     | 4                  | 5      | 3                  | 4      |
| Bangchak               | Thailand    | 2011           | 100        | 97     | 10                 | 7      | 144            | 150    | 25                 | 22     | 53                 | 51     |
| Mandarin Oriental      | Singapore   | 2017           | 26         | 24     | 3                  | 3      | 2              | 2      | 2                  | 3      | 18                 | 19     |
| Belle Corp             | Philippines | 2013           | 7          | 9      | 1                  | 1      | 8              | 10     | 2                  | 1      | 1                  | 0      |
| Berjaya                | Malaysia    | 2015           | 114        | 117    | 11                 | 11     | 90             | 95     | 6                  | 4      | 16                 | 13     |
| Hutchison              | Singapore   | 2016           | 44         | 43     | 8                  | 6      | 12             | 13     | 8                  | 8      | 20                 | 18     |
| Duc Thanh              | Vietnam     | 2015           | 12         | 20     | 1                  | 1      | 3              | 5      | 1                  | 0      | 1                  | 0      |
| Gajah Tunggal          | Indonesia   | 2014           | 120        | 124    | 16                 | 13     | 101            | 106    | 7                  | 5      | 11                 | 8      |
| Cal-comp               | Thailand    | 2011           | 40         | 37     | 3                  | 3      | 17             | 19     | 6                  | 7      | 21                 | 23     |
| CWT                    | Singapore   | 2012           | 27         | 25     | 0                  | 0      | 2              | 3      | 5                  | 5      | 7                  | 7      |
| HAGL                   | Vietnam     | 2015           | 52         | 51     | 4                  | 4      | 30             | 32     | 4                  | 4      | 13                 | 12     |
| First Phil             | Philippines | 2013           | 39         | 38     | 4                  | 4      | 18             | 18     | 1                  | 0      | 5                  | 3      |
| IOI                    | Malaysia    | 2012           | 76         | 76     | 5                  | 6      | 64             | 66     | 6                  | 5      | 7                  | 6      |
| Fajar Surya            | Indonesia   | 2009           | 45         | 42     | 9                  | 10     | 43             | 42     | 5                  | 5      | 7                  | 5      |
| Lautan Luas            | Indonesia   | 2010           | 45         | 45     | 9                  | 11     | 19             | 22     | 1                  | 1      | 4                  | 3      |
| Hartalega              | Malaysia    | 2010           | 15         | 16     | 2                  | 2      | 3              | 5      | 6                  | 6      | 9                  | 9      |
| PanUnited              | Singapore   | 2009           | 30         | 29     | 6                  | 6      | 13             | 11     | 1                  | 0      | 4                  | 4      |
| Thai Central Chemicals | Thailand    | 2014           | 85         | 83     | 8                  | 8      | 44             | 40     | 14                 | 16     | 30                 | 32     |
| Tipco Asphalt          | Thailand    | 2011           | 52         | 67     | 12                 | 2      | 50             | 43     | 5                  | 3      | 17                 | 14     |

**Notes for Appendix F1:** *Forlook\_count* is the count of forward-looking sentences in the annual report; *Financial\_count/ Strategy\_count/ Structure\_count/ Coreenvi\_count* is the count of financial/ strategy-related/ structure-related/ corporate environment-related words in forward-looking sentences; *Forlookpositive\_count/ Forlooknegative\_count* is the count of positive/ negative words in forward-looking sentences.

**Notes for Appendix F2:** *Risk\_count* is the count of risk-related sentences in the annual report; *Riskforlook\_count* is the count of forward-looking words in risk-related sentences; *Riskquan\_count* is the count of quantitative words in risk-related sentences; *Riskpositive\_count/ Risknegative\_count* is the count of positive/ negative words in risk-related sentences.

**Appendix G. Hausman test results**

**Appendix G1. Hausman test results for the model with forward-looking disclosure and ownership variables**

| Dependent variable: Forwlook_count                                 | Coefficients |               |                             | sqrt(diag(V_b-V_B)) |
|--|--------------|---------------|-----------------------------|---------------------|
|  | (b)          | (B)           | (b-B)                       |                     |
|  | Fixed effect | Random effect | Difference                  | S.E.                |
| Lagged Institution_own   | -0.1097      | -0.0631       | -0.0466                     | 0.0171              |
| Lagged Foreign_own   | 0.2437       | 0.2204        | 0.0233                      | 0.0451              |
| Lagged Manager_own   | 0.1086       | -0.0575       | 0.1661                      | 0.0620              |
| Lagged Government_own  | -0.4217      | 0.2400        | -0.6617                     | 0.1533              |
| Lagged Squared Institution_own                                     | 0.1868       | 0.1456        | 0.0413                      | 0.0210              |
| Lagged Squared Foreign_own   | -0.3572      | -0.2976       | -0.0597                     | 0.0446              |
| Lagged Squared Manager_own   | 0.0099       | 0.1481        | -0.1381                     | 0.0903              |
| Lagged Squared Government_own                                      | 0.2935       | -0.2222       | 0.5156                      | 0.1408              |
| Firmsize   | 0.0019       | 0.0195        | -0.0176                     | 0.0083              |
| Growth   | 0.0185       | 0.0178        | 0.0007                      | 0.0012              |
| Liquidity  | -0.0024      | -0.0009       | -0.0015                     | 0.0009              |
| Leverage   | 0.0005       | -0.0010       | 0.0015                      | 0.0025              |
| Profitability  | 0.0316       | 0.0261        | 0.0055                      | 0.0162              |
| Auditor  | 0.0069       | 0.0229        | -0.0160                     | 0.0112              |
| Boardsize  | 0.0035       | -0.0112       | 0.0148                      | 0.0024              |
| Independence   | 0.0560       | 0.0123        | 0.0437                      | 0.0274              |
| Reportsize   | 0.8956       | 0.8903        | 0.0053                      | 0.0066              |
| b = consistent under Ho and Ha; obtained from xtreg                |              |               |                             |                     |
| B = inconsistent under Ha, efficient under Ho; obtained from xtreg |              |               |                             |                     |
| Test: Ho: difference in coefficients not systematic                |              |               |                             |                     |
|  | chi2(17)     | =             | (b-B)'[(V_b-V_B)^(-1)](b-B) |                     |
|  |              | =             | 129.15                      |                     |
|  | Prob>chi2    | =             | 0.0000                      |                     |

**Appendix G2. Hausman test results for the model with risk disclosure and ownership variables**

| Dependent variable: Risk_count                                     | Coefficients |               |                             | sqrt(diag(V_b-V_B)) |
|--|--------------|---------------|-----------------------------|---------------------|
|  | (b)          | (B)           | (b-B)                       |                     |
|  | Fixed effect | Random effect | Difference                  | S.E.                |
| Lagged Institution_own   | 0.1630       | 0.0710        | 0.0920                      | 0.0207              |
| Lagged Foreign_own   | 0.2211       | 0.2803        | -0.0591                     | 0.0553              |
| Lagged Manager_own   | -0.3646      | -0.5463       | 0.1817                      | 0.0761              |
| Lagged Government_own  | -0.5558      | -0.9555       | 0.3998                      | 0.1905              |
| Lagged Squared Institution_own                                     | -0.1534      | -0.0536       | -0.0998                     | 0.0253              |
| Lagged Squared Foreign_own   | -0.2747      | -0.3254       | 0.0507                      | 0.0546              |
| Lagged Squared Manager_own   | 0.6853       | 0.9271        | -0.2417                     | 0.1106              |
| Lagged Squared Government_own                                      | 0.6429       | 1.0668        | -0.4239                     | 0.1741              |
| Firm size  | 0.0082       | 0.0277        | -0.0195                     | 0.0104              |
| Growth   | 0.0285       | 0.0238        | 0.0048                      | 0.0014              |
| Liquidity  | 0.0058       | 0.0036        | 0.0022                      | 0.0011              |
| Leverage   | 0.0217       | 0.0282        | -0.0065                     | 0.0031              |
| Profitability  | 0.1238       | 0.1756        | -0.0519                     | 0.0196              |
| Auditor  | -0.0392      | -0.0278       | -0.0114                     | 0.0139              |
| Board size   | -0.0071      | -0.0066       | -0.0004                     | 0.0029              |
| Independence   | 0.0150       | -0.2489       | 0.2639                      | 0.0336              |
| Report size  | 0.8756       | 0.9312        | -0.0556                     | 0.0081              |
| b = consistent under Ho and Ha; obtained from xtreg                |              |               |                             |                     |
| B = inconsistent under Ha, efficient under Ho; obtained from xtreg |              |               |                             |                     |
| Test: Ho: difference in coefficients not systematic                |              |               |                             |                     |
|  | chi2(17)     | =             | (b-B)'[(V_b-V_B)^(-1)](b-B) |                     |
|  |              | =             | 109.71                      |                     |
|  | Prob>chi2    | =             | 0.0000                      |                     |

**Appendix G3. Hausman test results for the model with forward-looking disclosure and stock return volatility**

| Dependent variable: Volatility                                     | Coefficients |               |                               | sqrt(diag(V_b-V_B)) |
|--|--------------|---------------|-------------------------------|---------------------|
|  | (b)          | (B)           | (b-B)                         |                     |
|  | Fixed effect | Random effect | Difference                    | S.E.                |
| Forwlook_count   | 0.0052       | -0.0012       | 0.0064                        | 0.0063              |
| Forwlook_percent   | -0.3281      | 0.0637        | -0.3918                       | 0.1095              |
| Volume   | 0.0173       | 0.0140        | 0.0033                        | 0.0008              |
| EP   | -0.0182      | -0.0172       | -0.0010                       | 0.0042              |
| Beta   | -0.0047      | -0.0150       | 0.0103                        | 0.0023              |
| Mvolatility  | 0.5960       | 0.3542        | 0.2418                        | 0.1234              |
| Institution_own  | -0.0831      | -0.0625       | -0.0206                       | 0.0046              |
| Foreign_own  | -0.0092      | 0.0109        | -0.0201                       | 0.0102              |
| Manager_own  | 0.0084       | -0.0374       | 0.0458                        | 0.0148              |
| Government_own   | 0.0473       | 0.0823        | -0.0350                       | 0.0308              |
| Firmsize   | 0.0052       | 0.0052        | 0.0000                        | 0.0043              |
| Growth   | 0.0221       | 0.0181        | 0.0040                        | 0.0012              |
| Liquidity  | 0.0015       | 0.0015        | 0.0000                        | 0.0007              |
| Leverage   | -0.0044      | -0.0067       | 0.0023                        | 0.0022              |
| Profitability  | 0.0176       | 0.0827        | -0.0651                       | 0.0165              |
| Reportsize   | -0.0441      | -0.0337       | -0.0104                       | 0.0065              |
| Auditor  | 0.0188       | 0.0249        | -0.0061                       | 0.0073              |
| Boardsize  | 0.0013       | 0.0038        | -0.0025                       | 0.0014              |
| Boardindependence  | -0.0769      | -0.0177       | -0.0591                       | 0.0173              |
| b = consistent under Ho and Ha; obtained from xtreg                |              |               |                               |                     |
| B = inconsistent under Ha, efficient under Ho; obtained from xtreg |              |               |                               |                     |
| Test: Ho: difference in coefficients not systematic                |              |               |                               |                     |
|  | chi2(17)     | =             | $(b-B)'[(V_b-V_B)^{-1}](b-B)$ |                     |
|  |              | =             | 174.47                        |                     |
|  | Prob>chi2    | =             | 0.0000                        |                     |

**Appendix G4. Hausman test results for risk disclosure and stock return volatility**

| Dependent variable: Volatility                                     | Coefficients |               |                             | sqrt(diag(V_b-V_B))<br>S.E. |
|--|--------------|---------------|-----------------------------|-----------------------------|
|  | (b)          | (B)           | (b-B)                       |                             |
|  | Fixed effect | Random effect | Difference                  |                             |
| Risk_count   | 0.0064       | -0.0057       | 0.0120                      | 0.0056                      |
| Risk_percent   | -0.3201      | -0.0739       | -0.2463                     | 0.0971                      |
| Volume   | 0.0173       | 0.0140        | 0.0033                      | 0.0008                      |
| EP   | -0.0181      | -0.0173       | -0.0008                     | 0.0043                      |
| Beta   | -0.0053      | -0.0151       | 0.0098                      | 0.0023                      |
| Mvolatility  | 0.6228       | 0.4396        | 0.1832                      | 0.1190                      |
| Institution_own  | -0.0835      | -0.0626       | -0.0208                     | 0.0046                      |
| Foreign_own  | -0.0088      | 0.0108        | -0.0196                     | 0.0101                      |
| Manager_own  | 0.0067       | -0.0366       | 0.0433                      | 0.0148                      |
| Government_own   | 0.0477       | 0.0817        | -0.0340                     | 0.0308                      |
| Firm_size  | 0.0053       | 0.0054        | -0.0001                     | 0.0043                      |
| Growth   | 0.0221       | 0.0184        | 0.0036                      | 0.0012                      |
| Liquidity  | 0.0016       | 0.0015        | 0.0001                      | 0.0007                      |
| Leverage   | -0.0043      | -0.0065       | 0.0022                      | 0.0022                      |
| Profitability  | 0.0170       | 0.0813        | -0.0643                     | 0.0165                      |
| Reportsize   | -0.0455      | -0.0296       | -0.0159                     | 0.0058                      |
| Auditor  | 0.0171       | 0.0247        | -0.0076                     | 0.0073                      |
| Boardsize  | 0.0013       | 0.0038        | -0.0025                     | 0.0014                      |
| Boardindependence  | -0.0782      | -0.0186       | -0.0596                     | 0.0172                      |
| b = consistent under Ho and Ha; obtained from xtreg                |              |               |                             |                             |
| B = inconsistent under Ha, efficient under Ho; obtained from xtreg |              |               |                             |                             |
| Test: Ho: difference in coefficients not systematic                |              |               |                             |                             |
|  | chi2(17)     | =             | (b-B)'[(V_b-V_B)^(-1)](b-B) |                             |
|  |              | =             | 176.31                      |                             |
|  | Prob>chi2    | =             | 0.0000                      |                             |