

## Is Earnings Quality Influenced by Environmental, Social, and Governance (ESG) Disclosures? Evidence from the Alternative Capital Market of Thailand

Muttanachai Suttipun<sup>1</sup> and Thanyawee Pratoomsuwan<sup>2</sup>

Prince of Songkla University, Thailand<sup>1</sup>

Mahidol University International College, Thailand<sup>2</sup>

Corresponding author: thanyawee.pra@mahidol.ac.th<sup>2</sup>

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### Abstract

The study investigates (1) the level of environmental, social, and governance (ESG) disclosures in annual reports of Market for Alternative Investment (MAI) listed firms during 2017 to 2021, and (2) test for the impact of ESG disclosures on earnings quality. One hundred and twenty firms from the MAI were used as samples in this study (600 firm-year observations). We employed Content analysis to quantify the amount of the ESG disclosures, while an Extended Modified Jones of Yoon's model was used to measure corporate earnings quality. Our results show that governance was the most common ESG disclosure in the annual report of MAI firms during the period being studied, followed by social disclosure and environmental disclosure respectively. There was an increasing trend of environmental, social, and disclosures between 2017 to 2021. Moreover, the study found a significant and negative impact of social disclosure on earnings management, suggesting that firms with higher levels of social disclosure are likely to engage in less earnings management. Conversely, the positive association between environmental and governance disclosure and earnings quality could imply less engagement in earnings management activities.

**Keywords:** ESG disclosures, earnings quality, alternative capital market, Thailand

### Introduction

In today's world, sustainability management by ESG management and disclosure is one of the main elements of good corporate governance. Unlike corporate traditional reporting, which provide financial information, ESG disclosure will provide non-financial

information in terms of environmental, social, and governance perspectives. Top-management uses ESG disclosure as a tool to increase corporate information interests from its stakeholders, reduce conflict of interest, and increase accountability and transparency. In Thailand, ESG disclosure is adopted by the Global Reporting Initiative (GRI) Standard Guideline that consists of 11 items as follows: (1) environment disclosure (2) social disclosure, and (3) governance disclosure.

Mohmed, Flynn, and Grey (2019) suggested that ESG disclosure can positively or negatively influence earnings quality because ESG disclosure can work as the corporate strategy that enhances and sustains corporate reputation and image. Therefore, engaging in ESG disclosure may constrain manager to manage the earnings, resulting in more reliable financial information (Kim, Park, & Wier, 2012; Atkins, 2006). On the other hand, Petersen and Vredenburg (2009) suggested that firm's engagement with ESG disclosure manifests managerial opportunistic behavior, causing the conflict of interest between managers and shareholders. In this regard, the ESG disclosure could be used as an entrenchment strategy for inefficient CEOs (Cespa & Cestone, 2007). Thus, ESG disclosure may negatively impact on earnings quality. Taken together, the relationship between ESG disclosure and earnings quality yield mixed and inconclusive and could be context specific.

It is worth to note that although several previous studies have examined the relationship between ESG disclosure and corporate earnings quality (see Choi and Pae, 2011; Yip, Van Staden, & Cahan, 2011; Cheng and Kang, 2016; Kim et al., 2012; Hong and Anderson, 2011; Calegari Chotigeat, & Harjoto, 2010; Yoon, Kim, & Lee, 2019; Arif and Nadeem, 2022; Bose and Yu, 2023; Dang et al., 2021; Ellili, 2022; Joubert, 2020; Rezaee, Dou, & Zhang, 2020), no empirical study has yet been made to investigate the ESG performance of listed companies in MAI in Thailand. Secondly, the listed MAI companies are family-owned businesses with a high concentration of family ownership that can weaken a firm's corporate governance principle. Finally, the average ESG disclosure in Thailand is relatively low as compared to that of European countries, which indicates the need of more understanding of corporate earnings quality and ESG disclosure within the Thai context. Given the aforementioned research gap, this study examines how level of ESG disclosures influence earnings quality.

This study provides insights on the extent to which level of ESG disclosure of MAI listed firms in Thailand impact the quality of earnings. The reminder of this study is organized as follows. A literature review and the hypothesis development are discussed in Section 2.

Section 3 describes the research methodology and data analysis. Research findings, discussion, and summary are discussed in Section 4, 5, and 6 respectively.

### Literature Review and Hypothesis Development

In recent years, the extent to which ESG disclosures have benefited or harmed society has received more attention. In response to increasing social pressure, firms tend to strive to provide this type of non-financial information either as a standalone report or integrated as part of their annual report. Although there has been extensive and diverse research on the importance of ESG disclosure, its definition remains uncontested. It is often argued by many researchers that ESG disclosures include both maximizing the positive impact as well as minimizing or avoiding negative impacts on society and environment (Carroll, 1979; Strike, Gao, & Bansal, 2006). This is consistent with the ESG disclosure definition from European Commission (2019) which has defined the ESG disclosure as to firms are responsible for their impact on society, which can be divided into 1) maximizing the value for all stakeholders by “doing good” and 2) minimizing possible adverse impacts by “avoiding bad”.

Companies engage in ESG disclosures for many reasons. Porter and Kramer (2006) suggested companies may engage in social responsibility, moral obligation, and social stewardship of the environment and community to ensure their license to operate and the firm’s reputation. They also specifically denoted that firms with positive image of being socially and environmentally responsible can enhance their reputation and image. This is consistent with the Hong and Anderson (2011) findings which indicated that ESG disclosures could be viewed as the firms’ attempt to influence external stakeholders to assess their financial report more favorably. However, it is also worthwhile to note that, despite the fact that ESG disclosures contributes a positive image to the firm’s stakeholders, a rising level of public scrutiny could be expected due to the questionable nature of some of their actions. An opportunistic tendency could be expected in firms with a high commitment to ESG disclosures. In this context, firms may use ESG disclosures as to ensure their reputation, enabling them a “license to operate” while managing their earnings. As the empirical evidence regarding the relationship between ESG disclosures and earnings management are inconsistent, it remains challenging to make a conclusion about the nature of relationship. Building on this research gap, this study explores the relationship between ESG engagement and earnings management in the context of emerging market setting – the MAI market.

## Literature Review

### 1. ESG Disclosure and the Constraint of Earnings Management

Previous research has explained the ESG disclosures and earnings management relationship using different theories, for example, agency theory, stakeholder theory and stewardship theory (Chiang & Shiao, 2015; Muttakin, Khan, & Azim, 2015; Prior, Surroca, & Tribó, 2008). According to the stewardship theory, top managers will engage in ESG disclosures due to ethical rather than financial reasons. In this perspective, positive relationship with various stakeholders is crucial for social capital and sustainable financial performance (Donaldson and Preston, 1995). Consequently, investing in ESG disclosure is a strategy that can enhance and sustain corporate reputation (Mohmed et al., 2019). As a result, engaging in ESG disclosure may constrain the managers' opportunistic tendencies related to earnings management, thus, firm's financial information should be more transparent and reliable (Kim et al., 2012; Atkins, 2006).

Recent studies that support this viewpoint indicated that firms with better ESG performance were less likely to manage earnings measured by discretionary accrual, income smoothing, and avoiding reporting losses (Choi & Pae, 2011; Yip et al., 2011; Cheng & Kang, 2016; Kim et al., 2012; Hong & Anderson, 2011; Calegari et al., 2010; Yoon et al., 2019). Specifically, Hong and Anderson (2011) indicating that practicing ESG disclosure constrains manager from manipulating the earnings to meet stakeholders' expectation (Kim et al., 2012). Bozzolan et al. (2015) further investigated the effect of ESG disclosure on real earnings management. Their findings indicated that firms with ESG disclosure are less likely to engage in real earnings management when compared to accrual earnings management. Kim et al. (2012) and Sánchez-Torné, Morán-Álvarez, and Pérez-López (2020) particularly noted that this negative link between firms with higher ESG disclosure and earnings quality was driven by the ethical and reputational concern of the manager. This argument supports the later findings from Axjonow, Ernstberger, and Pott (2008) which suggested that the three dimensions of ESG disclosures are positively associated with corporate reputation.

The negative relation between ESG disclosures and earnings management can also be explained from Fombrun and Shanley (1990) and Lai et al. (2010) that view ESG disclosure as a form of reputation-building. This suggested that firms protect their reputation by inhibiting the managers from engaging in socially unacceptable behaviors. According to the stakeholder-stewardship, it suggests that firms that disclose more ESG would engage in low earnings

management. To test the negative link between ESG disclosures and earnings management, we propose the following hypothesis.

**H1:** Firms engaging in higher ESG disclosure is less likely to manage the earnings.

## **2. Opportunistic Effect of ESG Disclosure on Earnings Management**

Despite numerous studies investigating the relationship between ESG disclosure and earnings management, the effect of ESG disclosure on earnings quality can be positive or negative (Chih, Shen, & Kang, 2008). This section provides the review of studies concerning opportunistic motives for ESG disclosure on earnings management.

Based on the agency theory, managers' incentives are opportunistic. Previous studies substantiated the positive relation between ESG disclosure and the quality of financial reporting through the level of earnings management (Gargouri, Shabou, & Francoeur, 2010; Prior et al., 2008). Petersen and Vredenburg (2009) suggested that firms that engage with ESG disclosure are associated with managerial opportunistic behavior, leading to the conflict of interest between managers and shareholders. In this regard, ESG disclosure could be used as an entrenchment strategy for inefficient CEOs (Cespa & Cestone, 2007). Engaging in ESG initiatives can promote a positive image among various stakeholder groups (Brammer & Pavelin, 2006), allowing firms to operate their business with least conflict. The findings suggested that managers are motivated to engage in ESG disclosure to build goodwill to reduce possible reputational loss associated with corporate misconduct (Hemingway & MacLagan, 2004; Christensen, 2016). Thus, the decision to engage in ESG disclosure could be a strategy to conceal the earnings management activities.

Since this theory posits that managers should engage in ESG activity only when they private benefits are received (Dhaliwal et al., 2011; Karnani, 2010), by disclosing ESG-related information, not only that the manager can divert attention from the poor earnings quality, they can also satisfy stakeholders' expectations relating to ESG (Prior et al., 2008). To support the opportunistic hypothesis (Prior et al., 2008), Grougiou et al. (2014) found that ESG disclosure in US bank is driven by earnings management. They suggested that the bank managers who engaged in questionable financial reporting practices tended to use ESG disclosure to divert public attention. Thus, stakeholders may not be able to identify whether ESG disclosure is now being used for the purpose of 'greenwashing' (Martínez-Ferrero, Banerjee, & García-Sánchez, 2016). Similarly, Gargouri et al. (2010) also reported the positive relation between earnings management and corporate social performance especially in area

of environment and employees. Muttakin et al. (2015) also show that firms with poor earnings quality have greater ESG commitment. Finally, a recent work from Jordaan, De Klerk, & de Villiers (2018) provided evidence indicating that South African firms with better ESG performance are more likely to involve in income-increasing earnings management. Together, when managers' incentives are driven from self-interest, then we expect a positive relation between level of ESG disclosure and earnings management. To examine the positive relation between ESG engagement and earnings management, hypothesis 2 is stated as follows;

**H2:** Firms engaging in higher ESG disclosure are more likely to engage in earnings management.

## Methodology

### Sample

To investigate the hypothesis, the data of listed companies during 2017 to 2021 from the MAI of Thailand were collected. The sample excluded the listed companies that (1) do not end their accounting year on 31<sup>st</sup> December each year, (2) do not have annual reports during 2017 to 2021, (3) are registered in the financial industry, and property fund sector, and (4) are under rehabilitation. After reducing these conditions, 120 firms were adopted as the samples in this study. Therefore, the final samples were consisted of 600 firm-years of observations.

### Dependent and Independent Variable

**Table 1** Variables' measurement of the study

Variables	Notation	Measurement
Earnings quality	EQ	Extended Modified Jones of Yoon's model
ESG disclosure	ESG	Content analysis by word counting
Environmental disclosure	ENV	Content analysis by word counting
Social disclosure	SOCIAL	Content analysis by word counting
Governance disclosure	GOV	Content analysis by word counting
Firm size	SIZE	Natural logarithm of total asset
Firm age	AGE	Year of firm age
Profitability	PROFIT	Ratio of return on asset (ROA)
Leverage	RISK	Ration of liability on equity

## Measurement of Variable

### Independent Variable – ESG disclosure

The annual reports during 2017 to 2021 were used to collected data from ESG disclosures, earnings quality, and corporate characteristics. In terms of ESG disclosures as independent variables, we used content analysis to measure the level of ESG disclosures. Although there are several units of content analysis such as page count, sentence count, or checklist, the study selected word counting to quantify ESG disclosures. We separated the ESG disclosures into three dependent variables which are environmental, social, and governance, as adopted by the Global Reporting Initiative (GRI) Standard Guideline (Stock Exchange of Thailand, 2017). Within the 11 items, environmental disclosures covered four items (energy, water, waste management, and greenhouse gas management), while social disclosure covered three items (workers/employees' treatment, responsibility to customers, and social/community development), and governance disclosure covered four items (good corporate governance, risk management, corporate innovation, and supply chain management).

### Dependent Variable – Earning Quality

We used cross-sectional analysis the examine the models. The earnings quality was measured by the Extended Modified Jones of Yoon's model using discretionary accruals. Finally, firms' characteristics, such as size, age, profitability, and leverage, were the control variables in this study. The measurement of the variables is shown in Table 1. Multiple regression analysis was used to examine the influences of ESG disclosures on earnings quality as indicated in the equation below. Model 1 examines the aspects of ESG disclosure segmented into social, environmental and governance categories, with control variables included in the equation as outlined in Model 2. Model 3 analyzes comprehensive ESG disclosure, including control variables in the equation as specified in Model 4.

$$EQ_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOCIAL_{it} + \beta_3 GOV_{it} + \varepsilon_{it} \quad (1)$$

$$EQ_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOCIAL_{it} + \beta_3 FG_{it} + \beta_4 SIZE_{it} + \beta_5 AGE_{it} + \beta_6 PROFIT_{it} + \beta_7 RISK_{it} + \varepsilon_{it} \quad (2)$$

$$EQ_{it} = \beta_0 + \beta_9 ESG_{it} + \varepsilon_{it} \quad (3)$$

$$EQ_{it} = \beta_0 + \beta_9 ESG_{it} + \beta_4 SIZE_{it} + \beta_5 AGE_{it} + \beta_6 PROFIT_{it} + \beta_7 RISK_{it} + \varepsilon_{it} \quad (4)$$

## Findings

To answer the first objective, from 600 firms-year of observations, table 2 indicates the extent, pattern, and level of ESG disclosures in the MAI market of Thailand. The results are as follows: Governance disclosure (Mean = 2856.01 average words, SD = 1929.18) was the most common type of ESG disclosures followed by social disclosure (Mean = 1,558.76 average words, SD = 952.84), and environmental disclosure (Mean = 356.74 average words, SD = 272.49). There was an increase in both the environmental and social disclosures between 2017 to 2021. In addition, the highest growth of ESG disclosures was in environmental disclosures at 53.67 percent from 2017 to 2021, following by governance disclosures at 48.36 percent, and social disclosures at 39.87. Finally, the average words of ESG disclosures were 4,771.51 words (SD = 2683.63), and tend to increase during the period under study.

**Table 2** Extent and pattern of ESG disclosures during 2017 to 2021

Year	ENV		SOCIAL		GOV		Overall ESG	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
2017	285.81	20.66	1311.33	75.32	2297.88	146.64	3895.01	203.48
2018	314.42	22.65	1446.98	81.61	2634.35	165.01	4395.74	219.34
2019	348.52	22.67	1525.84	76.81	3862.16	169.80	4736.51	226.94
2020	395.76	25.68	1675.37	91.43	3076.33	173.21	5147.45	246.51
2021	439.22	29.54	1834.28	100.53	3409.32	204.06	5682.81	290.66
Average	356.74	272.49	1558.76	952.84	2856.01	1929.18	4771.51	2683.63

Table 3 shows the correlation matrix. No multicollinearity problems between variables used are apparent. Moreover, correlations indicate that EQ is positively correlated to ED and GD at the 0.01 level, while there is no correlation between EQ, SD, SIZE, AGE, PROFIT, and RISK at 0.05 level.

**Table 3** Descriptive analysis and correlation matrix

Variable	EQ	ENV	SOCIAL	GOV	SIZE	AGE	PROFIT	RISK
EQ	1	.087*	-.028	.150**	-.029	.009	.040	-.011
ENV	-	1	.653**	.472**	.080	-.040	-.059	.007
SOCIAL	-	-	1	.452**	.044	-.099*	.003	.068



**Table 3** (continued)

Variable	EQ	ENV	SOCIAL	GOV	SIZE	AGE	PROFIT	RISK
GOV	-	-	-	1	-.003	-.047	-.003	.058
SIZE	-	-	-	-	1	-.010	.018	.030
AGE	-	-	-	-	-	1	-.073	.023
PROFIT	-	-	-	-	-	-	1	-.067
RISK	-	-	-	-	-	-	-	1
Mean	2.769	356.74	1558.76	2856.01	1.673	9.580	.159	1.353
SD	2.150	272.49	952.84	1929.18	1.924	5.370	.148	.273

\*\* is significant at 0.01, and \* is significant at 0.05

Table 4 demonstrates the results of multiple regression. The coefficients of determination (R-squared) for the four models ranges from 0.043 to 0.052, and the adjusted R-squared is from 0.038 to 0.048. This indicated that the models can explain approximately 8.934 to 2.772 percent of the variation in the data. For overall ESG disclosure in Model C, the findings support H1, suggested that higher-level ESG disclosure firms tend to engage less earnings management activities. However, H2 is partly supported especially for the social component of ESG disclosure. In particular, for the impact of component of ESG disclosure on the earnings quality, the findings of both models of A and B show that EQ is positively influenced by GOV and ENV at the 0.01 and 0.05 levels, while SOCIAL is found to negatively influence on EQ at the 0.01 level. There is no statistically significant relationship between EQ, SIZE, AGE, PROFIT, and RISK at the 0.05 level. In models C and D, the study found a significant positive effect of ESG disclosure and earnings quality at 0.01 level.

**Table 4** Multiple regression for ESG disclosure and earnings quality.

Variables	Model A	Model B	Model C	Model D
ESG	-	-	.107 (2.625**)	.110 (2.692**)
ENV	.130 (2.366*)	.138 (2.487*)	-	-
SOCIAL	-.192 (-3.546**)	-.194 (-3.549**)	-	-
GOV	.176 (3.774**)	.173 (3.711**)	-	-
SIZE	-	-.031 (-.775)	-	-.031 (-.761)
AGE	-	.007 (.181)	-	.021 (.504)
PROFIT	-	.050 (1.238)	-	.042 (1.025)

Table 4 (continued)

Variables	Model A	Model B	Model C	Model D
RISK	-	-.005 (-.115)	-	-.015 (-.369)
Max VIF	1.828	1.906	1.000	1.012
R Square	.043	.046	.051	.052
Adjust R	.038	.039	.048	.046
F-value	8.934**	4.124**	6.889**	2.772*
Observations	600	600	600	600

The above table represents coefficients and t statistics in parentheses

\*\* is significant at 0.01, and \* is significant at 0.05

## Discussion

In this study, the ESG information is decomposed into Environment, Social and Governance components to examine its relationship to earnings quality. Using individual measures of ESG disclosures, the results demonstrate both positive and negative relationships between ESG engagement and earnings quality. Specifically, environmental and governance engagement are positively related to earnings quality (i.e., higher discretionary accrual) while the social component is negatively associated with earnings quality (i.e., lower discretionary accrual).

The negative relationship between earnings management and ESG engagement can be explained by several reasons. The first explanation is that firms intend to engage in ESG practice to improve their corporate image (Fombrun & Shanley, 1990; Cho & Patten, 2007; Simnett, Vanstraelen, & Chua, 2009; Linthicum, Reitenga, & Sanchez, 2010), therefore, these reputational concerns constraint managers from engaging in earnings manipulation (Kim et al., 2012). So, the negative association of ESG disclosures and earnings management is linked to corporate image and reputation. In line with this argument, ESG disclosures may be divided into two main dimensions, the so called “doing good” and “avoiding bad” (Lin-Hi & Muller, 2013; Minor & Morgan, 2011; Lin-Hi & Blumberg, 2018). The term “doing good” is characterized by its volunteer nature, for example, corporate volunteering, funding, and donations. In this context, a firm’s resources are contributed to a society’s wellbeing. To the end, ESG disclosures in terms of “doing good” emphasizes on firms being good corporate citizens (Carroll, 1998). Besides “doing good”, firms can also practice “avoiding bad” ESG disclosures

to prevent any potential harms to stakeholders and society (e.g., protecting human rights, avoiding corruption and fraud).

Consider the two perspectives of ESG disclosures, environmental and governance-related ESG disclosures are closely link to “avoiding bad” whereas social-related ESG disclosures focus on “doing good” disclosure. Because “doing good” better characterizes the ESG disclosures and firm’s reputation rather than “avoiding bad” (Lin-Hi & Blumberg, 2018), the negative relationship between the social component of ESG disclosures and earnings management could be partly explained by the risk of reputation losses. With more social-related ESG disclosure, a company builds up its reputation capital, and, to this end, tend to engage in less earnings management disclosure so as to avoid reputational losses which could significantly affect their performance. This argument is consistent with the findings from Pelozo (2006) which noted that firms that focused on supporting charities and social betterment had better financial performances due to the positive effect of their corporate reputation. In conclusion, ESG disclosures in this form is “pro-social” and creates higher social expectations which in turn improve reputation more than simply avoiding bad (i.e., environmental and corporate governance). Because of this, previous research also shows that “doing good” ESG disclosures also have a backfiring effect when any irresponsible behavior is discovered, and, according to expectation theory, the magnitude of reputational damage tends to be higher due to higher social expectations (Sohn & Lariscy, 2015).

For environmental and governance disclosures, the results show a significant and positive relationship to earnings management. As “avoiding bad” disclosure is less related to corporate reputation when compared to “doing good”, this may provide managers with incentives to engage in more earnings management practices. A possible explanation is that firms practicing in areas which impact the environment and governance incur high costs because these disclosures are expected to be embedded in the process of the firms’ real operation. As a result, it may have a negative effect on their financial performance, at least over the short-term, leading to a higher incentive for managers to indulge in earnings management practices. As our samples include firms that are listed in the MAI, thus, the firms’ size is relatively smaller than those listed in the SET market, environmental as well as governance initiatives appear to be too costly and do not seem to be a reasonable investment for smaller firms (Gargouri et al., 2010). However, it is also worthwhile to note that our findings contrast with Litt et al.’s (2014) analysis of U.S. firms. Litt et al. (2014) noted that firms with

better environmental performance exhibited lower earnings management because these firms were well performed without having to manipulate earnings. This could imply that performing “avoiding bad” ESG disclosures should benefit firms in more developed markets.

Although the existence of an effective corporate governance mechanism should constrain the opportunistic behavior of managers (Jensen & Meckling, 1976), and thereby should moderate the ESG and earnings management relationship, Amin & Cumming (2021) suggested that the firms with family-owned blockholders are involved more in earnings management disclosure. This is because these firms would have higher levels of asymmetric information which allows blockholders to extract the benefit from income-increasing earnings management. They further noted that this effect would be particularly stronger in countries with low regulatory enforcement. Their statistics documented that Thailand has the lowest corporate governance index score among the South East Asian countries. This provides support to our findings as our sample consists of smaller size firm listed in the MAI. Based on our findings, firms with more corporate governance-related ESG disclosures are likely to engage in higher level of earnings management. This could imply that, with the blockholder structure, their governance mechanism might effectively constrain managers’ opportunistic behavior and that the governance-related ESG disclosures in Thailand are more a matter of form over substance. These findings align with Buerter et al. (2020), who observed that powerful family-owned blockholders in emerging market may have incentives to manipulate financial reports especially when they have greater business information. Similarly, Choi, Lee, and Park (2013) also find that chaebol firms in South Korea and firms with high ownership concentration tend to use to conceal poor earnings.

### **Summary and Suggestion for Future Study**

This study investigates the pattern and level of ESG disclosure of listed companies in the MAI market of Thailand, and examine the relationship between ESG disclosure and earnings quality. The study found that EGS disclosure related to governance aspect was commonly reported in annual reporting followed by social disclosure, and then environmental disclosure. There was an increase of both environmental and social disclosures between 2017 to 2021. Finally, the average words of ESG disclosures were 4,771.51 words, and there was an increase of ESG disclosures during the period being study. In addition, the study found that there was a significantly negative influence of social disclosures on earnings quality, while

environmental and governance disclosures show the positive and significant influence on earnings quality.

The study's findings provide important implication. They suggested that firms should also give more attention to ESG disclosures as they may help to reduce agency problem especially in small to medium business with high family concentration. These findings could be used as a guideline for regulator and policy makers to address the possible transition from voluntary disclosures to mandatory disclosures in Thailand. Our findings also suggest that different area of ESG initiatives may affect earnings quality in different ways. However, it is essential to acknowledge the limitation of this study. The sample of our study do not cover the ESG disclosures for all listed firms since we focused on only the those listed in MAI, not in the Stock Exchange of Thailand (SET). In addition, there are also other proxies of ESG disclosure used in the previous studies. Future study may collect and compare the data from both SET and MAI markets to explore the differences of how environment, social, and governance ESG disclosures could impact earnings quality.

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