Research Article

The Impact of Environmental, Social and Governance (ESG) Reporting and Female Board Members on Financial Performance: Evidence from Thailand

Dr.Muttanachai Suttipun

Associate Professor of Department of Accountancy,

Faculty of Management Sciences, Prince of Songkla University

Received: *October 16, 2022*

Revised: *February 11, 2023*

Accepted: *February 24, 2023*

Dr.Rojana Khunkaew

Dr.Jittima Wichianrak*

Lecturer of Department of Accountancy,

Faculty of Management Sciences, Prince of Songkla University

*(*Corresponding Author)*

ABSTRACT

The purpose of this study was to investigate the level of environmental, social, and governance (ESG) reporting in listed companies' annual reports, and to test the impact of ESG reporting and female board members on the corporate performance of companies listed in the Stock Exchange of Thailand (SET). The population was all companies listed in the SET between 2015 and 2019. Content analysis was used to collect the ESG reporting, female board members from the female proportion of total board members, and corporate performance from the return on asset ratio. This study used descriptive analysis, correlation, and multiple regressions to analyse. It was found that ESG reporting had a positive influence on corporate performance, as well as female board members also had a positive influence on corporate performance. Furthermore, the female board members, interaction factor found a positive influence between ESG reporting and corporate performance. This means that top managements may encourage ESG reporting, especially environmental disclosure, to enhance their corporate performance. The findings also emphasize the need for ESG regulations to promote sustainable development in Thailand. Moreover, stakeholder-agency theory can be explained the reason for ESG reporting of the listed company in the context where disclosure is still voluntary.

Keywords: ESG Reporting, Female Board Members, Corporate Performance, Stakeholder-Agency Theory, Thailand

บทความวิจัย

ผลกระทบของการรายงานความรับผิดชอบด้านสิ่งแวดล้อม สังคม และบรรษัทภิบาล (ESG) และคณะกรรมการเพศหญิง ต่อผลการดำเนินงานทางการเงิน : หลักฐานจากประเทศไทย

ดร.มัทนชัย สุทธิพันธุ์
รองศาสตราจารย์ประจำสาขาวิชาการบัญชี
คณะวิทยาการจัดการ มหาวิทยาลัยสงขลานครินทร์

ดร.รจนา ขุนแก้ว
ดร.จิตติมา วิเชียรรักษ์*
อาจารย์ประจำสาขาวิชาการบัญชี
คณะวิทยาการจัดการ มหาวิทยาลัยสงขลานครินทร์
*(*ผู้ประสานงานหลัก)*

วันที่ได้รับต้นฉบับบทความ : *16 ตุลาคม 2565*
วันที่แก้ไขปรับปรุงบทความ : *11 กุมภาพันธ์ 2566*
วันที่ตอบรับตีพิมพ์บทความ : *24 กุมภาพันธ์ 2566*

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์ เพื่อศึกษาการรายงานความรับผิดชอบด้านสิ่งแวดล้อม สังคม และบรรษัทภิบาล (ESG) ในรายงานประจำปีของบริษัท และเพื่อทดสอบผลกระทบของการรายงาน ESG และคณะกรรมการเพศหญิง ที่มีต่อผลการดำเนินงานของบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย (SET) โดยประชากรคือ บริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย ระหว่างปี พ.ศ. 2558 - 2562 การเก็บข้อมูลใช้การวิเคราะห์เนื้อหาการรายงาน ESG ข้อมูลคณะกรรมการเพศหญิงจากสัดส่วนคณะกรรมการเพศหญิงต่อคณะกรรมการบริษัททั้งหมด และผลการดำเนินงานของบริษัท จากอัตราส่วนผลตอบแทนต่อสินทรัพย์ งานวิจัยนี้ใช้การวิเคราะห์เชิงพรรณา สหสัมพันธ์ และการถดถอยเชิงเส้นพหุคูณ ผลการวิจัยพบว่า การรายงาน ESG มีผลกระทบเชิงบวกต่อผลการดำเนินงานของบริษัท เช่นเดียวกับคณะกรรมการเพศหญิงที่มีผลกระทบเชิงบวกต่อผลการดำเนินงาน อีกทั้งคณะกรรมการเพศหญิงในฐานะตัวแปรกำกับ มีผลกระทบเชิงบวกต่อการรายงาน ESG และผลการดำเนินงาน แสดงให้เห็นว่า ผู้บริหารระดับสูงของบริษัทมีส่วนผลักดันการรายงาน ESG โดยเฉพาะอย่างยิ่งการรายงานด้านสิ่งแวดล้อม เพื่อเพิ่มประสิทธิภาพผลการดำเนินงานของบริษัท จากการศึกษาชี้ให้เห็นความต้องการกฎเกณฑ์ที่เกี่ยวข้องกับ ESG เพื่อส่งเสริมการพัฒนาอย่างยั่งยืนในประเทศไทย อีกทั้งสามารถนำทฤษฎีผู้มีส่วนได้เสีย-ตัวแทน มาอธิบายเหตุผลการรายงาน ESG ของบริษัทที่จดทะเบียน ในบริบทการเปิดเผยแบบสมัครใจ

คำสำคัญ: การรายงาน ESG คณะกรรมการเพศหญิง ผลการดำเนินงานทางการเงินของบริษัท ทฤษฎีผู้มีส่วนได้เสีย-ตัวแทน ประเทศไทย

1. Introduction

The new goal replacing maximizing wealth in today's economic mindset is likely to be sustainable businesses. Corporations have not only focused on economic dimensions but also their environmental, social, and governance dimensions. Moreover, in the new wealth maximizing companies, top managements have to satisfy the shareholders' demands, such as financial returns, and they also have to consider other stakeholders' demands and expectations (Li, Gong, Zhang, & Koh, 2018). There is growing demand for improving corporate disclosure, encourages corporations to disclose more non-financial information (Muttanachai Suttipun, 2021). Corporate sustainability is considered the corporate environmental and social responsibility to support society and community, and environmental lobbies' demands which associated with corporate survival. Therefore, corporations have to report financial and non-financial information to satisfy several groups of stakeholders for reducing possible impacts. Compared with traditional reporting mostly provide only financial information, the environmental, social, and governance (ESG) reporting can better satisfy the stakeholders' pursuit of information diversification. ESG reporting is adopted by the Global Reporting Initiative (GRI) Standards (GRI, 2020).

ESG reporting does provide benefits not only to stock exchanges, but can also benefit the corporate outcomes of higher performance, better value and reputation (Aboud & Diab, 2018; Aouadi & Marsat, 2018). This is because top managements try to spend the corporate utilities or resources to satisfy stakeholders' demands. In addition, the disclosure also helps reduce the conflict of interest and agency cost between top managements and shareholders. However, considering the efficiency of market processes and equilibrium between all stakeholders, stakeholder-agency theory is used to explain how the corporation balances the relationship between top managements and shareholders as well as the relationship between top managements and the other (Hill & Jones, 1992). This means that top managements in stakeholder-agency theory need to balance their stakeholders' demands and corporate utility loss, the corporations have to reduce and spend corporate resources, and this may create conflicts of interest between agent and principal.

However, the level of ESG reporting fluctuates and is inconclusive in today's world because of (1) changes in the economy, as the corporations have become more technology and IT businesses, so they provide less ESG reporting, and (2) increased scrutiny and accountability of ESG information have caused the corporations to pull back on sustainability transparency, which can be penalized by litigation and prosecution of risk and uncertainty but is demanded by regulations and laws of sustainability transparency. Regarding further research questions, the prior related literature on the benefits of ESG to corporate performance and related disclosures has given conflicting and inconclusive results. Some studies found a positive relationship between disclosures and corporate performance (Ekwueme, Egbunike, & Onyali, 2013; Slaper & Hall, 2011; Muttanachai Suttipun & Saefu, 2017). This is because the top managements strongly believes that their stakeholders will still have loyalties, if corporate actions and activities including ESG reporting can satisfy their stakeholders' demands and expectations (Muttanachai Suttipun & Saefu, 2017). In addition, the reporting can balance the relationship and reduce the conflict of interest between top managements and stakeholders. However, Li et al. (2018) and Connelly and Limpaphayom (2004) found that the top managements was more likely to view and feel that ESG disclosures are costs, acting to decrease their utilities and resources. But some studies have found no relationship between these variables (Hossain & Hammami, 2009).

Furthermore, governance mechanisms would play an important role influenced ESG reporting and corporate performance. Top managements or boards can perform the monitor role. Moreover, the diversified boards may provide more independence and better monitoring, especially the gender diversity of board members (Birindelli, Chiappini, & Savioli, 2020). The female directors seem to provide strong oversight resulted in better corporate governance (Mathew, Ibrahim, & Archbold, 2016). Also, gender equality is a part of the United Nations' Sustainable Development Goals (SDG Goal 5) which is about women opportunities in leadership and decision-making and it is a one of the biggest target for sustainability in Thailand (UN, 2023), that is why the gender diversity concept is gaining attraction. Therefore, this study investigates the female board members, as one of the governance mechanisms, in between the relationship between ESG reporting and corporate performance. However, prior related studies on female board members moderating the relationship between ESG reporting and corporate performance are very rare (Albitar, Hussainey, Kolade, & Gerged, 2020; Husted & Sousa-Filho, 2019). The female board members may improve the decision-making process by highlighting ESG strategies and providing different ideas during board discussions. This means that more females on boards may have a positive influence on financial performance (Aouadi & Marsat, 2018; Husted & Sousa-Filho, 2019).

Based on the research problems, this study purposed to investigate the level of ESG reporting of the company listed in Stock Exchange of Thailand between 2015 and 2019 and to test the influences of ESG reporting and female board members on corporate performance. This study had two main research questions, firstly, what was the level of ESG reporting of listed companies in Thailand between 2015 and 2019, and secondly, were there any possible influences of ESG reporting and female board members on the corporate performance of the listed companies in Thailand?

The research expects to provide evidence on the level of ESG reporting by listed companies in Thailand, and demonstrates the relationship between female board members, ESG reporting, and corporate performance in the view of stakeholder-agency theory. The study will decrease the research gap by analysing the link between ESG reporting and corporate performance interacting with female board members (gender diversity in the board). Finally, this study will provide some benefits for regulators, shareholders, top managements, other stakeholders, and listed companies in Thailand to improve their ESG reporting.

The rest of the paper is organised into fourth sections. The first section provides the literature review and hypothesis development including the theoretical perspective. Second section outlines research methodology which consists of sampling, data collection, and data analysis. Third section presents the results and discussion. Finally, the last section provides summary and suggestions for future study.

2. Literature Review

Theoretical Perspective

Many theories have been used to explain in relation to corporate performance and ESG reporting such as political economic theory (Huang & Kung, 2010), agency theory (Li et al., 2018), signalling theory (Almeyda & Darmansya, 2019), stakeholder theory (Joshi & Gao, 2009), legitimacy theory (Islam & Deegan, 2010; Muttanachai Suttipun, 2021), and stakeholder-agency theory (Albitar et al., 2020; Hill & Jones, 1992). Even though there have been many theories used in sustainability reporting studies. The stakeholder-agency theory, which underpins this study, will explain the influences of the disclosure and gender diversity on corporate performance. This is because stakeholder-agency theory can be used to explain the relationship between top managements (agents) and shareholders (principals) as well as the relationship between top managements (agents) and the other stakeholders in inefficient market countries (Hill & Jones, 1992).

Stakeholder-agency theory has been developed by Hill and Jones (1992) assumes that each stakeholder is a part of implicit and explicit contracts that can contribute to a corporation. However, only top managements can enter into a contractual relationship with all other stakeholder groups, and can directly manage the corporation's decision-making. Therefore, the top managements can be seen as agents representing the other stakeholder groups.

In stakeholder-agency theory, the relationships between top managements and the other stakeholders are divided into two main relationship types, (1) consisting of the relationship between top managements and shareholders, and (2) the relationship between top managements and the other stakeholders. For the first type of relationship, information asymmetry, agency cost and conflict of interest between these are always problems. Both agents and principals have to reduce these problems. Second, the relationship between top managements and the other stakeholders has to face utility loss problems. Problems emerge when the top managements try to satisfy their stakeholders' demands because the demands will reduce corporate utilities which are used to operate the corporation. Stakeholder-agency theory confirms that the other stakeholders place their claims into the corporation. Therefore, Agents have to satisfy the other stakeholder's needs by reducing the number of resources to pursuit of corporate growth (Hill & Jones, 1992). Thus, top managements need to balance their stakeholders' demands and corporate utility losses. However, agency cost, conflict of interest, and utility loss are inherent in the relationship between top managements and all shareholders. The main purpose of both relationships is to pay attention to divergent interests under governance structure.

There are differences and overlapping between stakeholder-agency theory, agency theory, and stakeholder theory. On the one hand, the agency theory can be used in efficient markets that (1) are surrounded by efficient firms, and (2) the existence of power equilibrium between top managements (agents) and shareholders (principles) must be admitted, while stakeholder-agency theory can be used in inefficient markets and different powers of equilibrium (Hill & Jones, 1992). On the other hand, stakeholder theory, the corporation have to provide its actions and activities followed by corporate stakeholder demands, while stakeholder-agency theory, top managements (agents) have to balance between their stakeholders' demands and corporate utility loss when satisfying the demands of stakeholders and optimal strategies for enhancing corporation financial performance (Heinfeldt & Curcio, 1997). In addition, the satisfaction of some stakeholders may create conflicts of interest between top managements (agents) and shareholders (principals).

In this situation, ESG disclosure is supposed reduce the information asymmetry, agency cost, and utility loss between top managements and shareholders, also between top managements and other stakeholders. ESG disclosure could be positively correlated to the satisfaction of stakeholders' expectations and demands, and the ability to influence corporate performance (Velte, 2016). The gender diversified boards may provide more independence and better monitoring (Birindelli et al., 2020) and female board members seem to provide strong oversight resulted in better corporate governance (Mathew et al., 2016). Furthermore, gender equality is in the United Nations' Sustainable Development Goals (SDG Goal 5) and it is a one of the biggest target for sustainability in Thailand (UN, 2023), that is why the gender diversity concept is gaining attraction. However, the other board diversity factors may take into consideration for the next research. Under the stakeholder-agency theory view, there are two the objectives in this study. The first objective is to investigate the level of ESG disclosure which will explain how top managements try to satisfy their stakeholders' demands by providing ESG disclosure as corporate actions and activities. The second objective is to test for the impact of ESG disclosure and female board members on corporate performance, which will explain how the corporation balances the relationship between top managements (agents) and shareholders (principals) as well as the relationship between top managements (agents) and the other stakeholders by using female board members for gender diversity.

ESG Reporting in Thailand

The Stock Exchange of Thailand (SET) has adopted the Global Reporting Initiative (GRI) Standard Guideline for companies listed (SET, 2017) leading corporations to sustain and have long-term performances (GRI, 2020). Not only the international sustainability guideline, in 2015, SET also invented ESG reporting (SET, 2019). The main content of ESG is for (1) consolidating sustainability data for and improving corporate efficiency, reducing risks, serving evaluation, and creating opportunities to earn more profit, (2) comprehension communicating to stakeholders, managing and maintaining their competitiveness, (3) gaining credit on the corporate responsibility along with performance and sustainable growth, (4) reflecting the business for attracting investors who concern in the long-term returns and quality corporation, and (5) considering for ESG-in-process and ESG-in-product rather than ESG-after-process.

Many companies have started to provide ESG reporting in their annual reports. Moreover, some of them have been announced by SET as Thailand Sustainable Investment (THSI) companies. Furthermore, ThaiPat, the organization under the SET, which has considered responsible for sustainable development, has launched ThaiPat ESG Index which benefits investors for decision making

There are three parts of ESG reporting (environmental, social, and governance) which consists of eleven items. The environmental part includes; energy, water, waste, and greenhouse gas management. The social part includes; equitable and fair of workers/employees, customer responsibility, and social/community development. Lastly, the governance part includes; good governance, sustainability risk management, supply chain management, and innovation (SET, 2019).

3. Hypothesis Development

ESG Reporting and Corporate Financial Performance

There are limited literature on ESG reporting and corporate performance (Wasiuzzaman, Ibrahim, & Kawi, 2022) also in Thailand. However, there are some prior related studies which have examined the influence of ESG reporting on Firm Value (Yordudom & suttipun, 2020) or on Market value of the firm, including have examined the influence between voluntary disclosures and corporate performance

(Connelly & Limpaphayom, 2004; Ekwueme et al., 2013; Hossain & Hammami, 2009; Slaper & Hall, 2011; Muttanachai Suttipun & Saefu, 2017).

Most of the previous related studies found, there was a positive influence between voluntary disclosures and corporate performance (Ekwueme et al., 2013; Slaper & Hall, 2011; Muttanachai Suttipun & Saefu, 2017). The study of Muttanachai Suttipun and Saefu (2017) found a positive relationship between sufficiency economy philosophy disclosure and the corporate performance of listed companies in Thailand. Slaper and Hall (2011) also found a positive impact of triple bottom line disclosure on firm performance of South African listed companies. The main reason for the positive relationship between these variables is that most companies employing voluntary disclosure strongly believe that their stakeholders will still have loyalties if corporate actions and activities including information disclosure can serve their stakeholders' demands and expectations (Muttanachai Suttipun, 2021). The stakeholder loyalties can generate higher corporate performance, better reputation, greater competitive advantage, higher satisfaction, and sustainable development. In addition, stakeholder-agency theory can explain that corporate voluntary disclosure will reduce utility loss between top managements and stakeholder demands (Hill & Jones, 1992). It results in better corporate performance. Therefore, companies can earn a higher performance by offsetting the costs and expenses of voluntary disclosure, including ESG reporting.

In opposition, some prior research found a negative influence between voluntary disclosure and corporate performance (Connelly & Limpaphayom, 2004; Wasiuzzaman et al., 2022; Yoon, Lee, & Byun, 2018). This may be because the companies may consisted the voluntary disclosure as costing to decrease their performance (Yoon et al., 2018) and ESG information are very high cost (Wasiuzzaman et al., 2022). Therefore, the companies will disclose minimally to meet requirements for their stakeholder demands. For example, Connelly and Limpaphayom (2004) found a negative influence between corporate social responsibility reporting and corporate performance of listed companies in Thailand. However, Hossain and Hammami (2009) found no relationship between voluntary disclosure and corporate performance. Therefore, while the literature is inconclusive, we pose the hypothesis that:

H1: There is a positive impact of ESG reporting on corporate performance.

Female Board Members and Corporate Performance, and Moderating Effect of Female Board Members on the Relationship between ESG Reporting and Corporate Performance

The literature revealed that female board members have influenced business outcomes, such as financial performance, earnings quality, reputation, and firm value. An adoption of international standards, the female board member is more conservative and has good participation on the board which leads to improved corporate performance (Li et al., 2018; Marinova, Plantenga, & Remery, 2016; Sanni, Aliu, & Olanrewaju, 2020; Yoon et al., 2018). The relationship between female board members and corporate performance can be explained by stakeholder-agency theory, which describes how the corporation balances the relationship between top managements and shareholders as well as the relationship between top managements and the other stakeholders by using female members for gender diversity. Therefore, more female board members may result in a positive impact on financial performance (Aouadi & Marsat, 2018; Husted & Sousa-Filho, 2019). For example, Velte (2016) found a positive link between female board members and German and Austrian listed companies' performance. Moreover, the study by Arayssi, Dah, and Jizi (2016) indicated that ESG reporting increased firm performance that having higher female board ratio. Therefore, this study purposes to clarify and expand the prior research by investigating the association between female board members and corporate performance.

H2: There is a positive impact from female board members on corporate performance.

From the theoretical viewpoints, stakeholder-agency theory explains how the corporation balances the relationship between top managements and shareholders as well as the relationship between top managements and the other (Hill & Jones, 1992). Therefore, top management or board will make the decision. Moreover, the related theory in relation to the gender that is the gender socialization theory, female have different characteristics from male, such as risk avoidance and positive moral behavior which will affect their decision-making (Boulouta, 2013; Eliwa, Aboud, & Saleh, 2023). Therefore, female board members opinion will affect to the corporation performance.

Several prior related studies suggest that female board members positively impact ESG reporting (Gulzar, Cherian, Hwang, Jiang, & Sial, 2019; Orazalin, 2019) as well as firm performance and value (Agyemang-Mintah & Schadewitz, 2019). This is because the female board members can improve decision-making, more females on boards increase the diversity of opinions resulting in quality in the decision-making process, therefore, it could have a positive influence on corporate performance (Adams & Ferreira, 2009; Husted & Sousa-Filho, 2019). The study of Ben-Amar, Chang, and McIlkenny (2017) found the proportion of female board members has a positive affected on voluntary disclosures. This is because, in the board room, female members put more emphasis on the social agenda for improving the corporate environmental and social images (Arayssi et al., 2016; Fernandez-Feijoo, Romero, & Ruiz-Blanco, 2014; Jizi, 2017). Therefore, the female board members can enhance corporate performance as well as ESG reporting. However, from the limited research, this is a very first study that considers female board members as the moderating factor in the relationship between ESG reporting and corporate performance among listed companies in Thailand, the context of male-dominated power structure:

H3: Female board members moderate a positive relationship between ESG reporting and corporate performance.

4. Methodology

4.1 Population and Sample

The population of this study are all listed companies in the SET between 2015 and 2019 (SET, 2020). However, this study did not include listed companies that (1) registered in the financial industry and property fund sector, (2) were withdrawn from listing or companies under rehabilitation, and (3) the end of the financial year was not on the 31st of December. The data was collected from annual reports because it is a legally report and widely recognised as the principal communicating report about their actions and activities (Muttanachai Suttipun, 2021).

The sample of this study after excluding those conditions was 200 listed companies with unbalanced panel data. The information on their annual reports between 2015 and 2019 was collected about ESG reporting, female board members, corporate performance, and corporate characteristics. Therefore, the final sample was 795 firm-year observations.

Content Analysis

In this study, content analysis was used to collect the ESG reporting. It can analyse the reporting content (Rose, Spinks, & Canhoto, 2015). Even though there are many content units, for example, page count, sentence count, or word count, the study selected checklist method to quantify ESG reporting. The reports were divided into eleven items or points with in three variables topics namely environmental, social, and governance variables, as adopted by the Global Reporting Initiative (GRI) Standard Guideline (SET, 2017). Therefore, the maximum score is eleven points if the corporate report all topics. The first topic is environment reporting which consists energy management, water management, waste management, and greenhouse gas management. The second topic is social reporting which consists fair human resources of workers/employees, customers responsibility, and social/community development. Finally, the governance reporting consists good corporate governance, sustainability risk management, supply chain management, and corporate innovation (SET, 2019).

Variables

Regarding the female board members, the quantitative variable was the proportion of female board members to total board size. Corporate financial performance was measured by return on asset ratio (ROA) which is an accounting-based measurement that indicate the successful and efficiency in utilizes its total assets to produce profit resulted in reflects business operational performance (Naeem, Cankaya, & Bildik, 2022). Many prior literatures used ROA as the corporate financial performance proxy (Ekwueme et al., 2013; Naeem et al., 2022; Theodoulidis, Diaz, Crotto, & Rancati, 2017; Zamil & Hassan, 2019). However, the ROA may show short term performance(Theodoulidis et al., 2017).

The ESG disclosure and female board members were independent variables, corporate performance was a dependent variable, whereas corporate characteristics were control variables such as firm age, audit type, and firm size which were used in the previous related study (Hodkam, 2016; Huaypad, 2019; M Suttipun & Sittidate, 2016) as shown in Table 1.

Table 1 Variable Measurements

Variable	Notation	Measurement
Performance	PROFIT	Return on asset ratio (ROA)
ESG disclosure	ESG	Content analysis by check list (1 = report, and 0 = not report, Maximum score is 11)
Environment disclosure	EN	Content analysis by check list (1 = report, and 0 = not report, Maximum score is 4)
Social disclosure	SO	Content analysis by check list (1 = report, and 0 = not report, Maximum score is 3)
Governance disclosure	CG	Content analysis by check list (1 = report, and 0 = not report, Maximum score is 4)
Female boards	FEMALE/FEM.	Proportion of female board members on total board
Firm age	AGE	Years of firm age
Audit type	AUDIT	Dummy variables as 1 = Big 4 auditors, and 0 = the others
Firm size	SIZE	Natural logarithm of total assets

Regression Model

First, to investigate the level of ESG reporting in annual used descriptive analysis. Second, correlation matrix was used to test the multicollinearity between variables. Finally, unbalanced panel data analysis was used to test for the potential impact of ESG reporting and female board members on corporate performance. Model 1 is to examine the relationship between control variables and corporate performance. Model 2 is to examine the relationship between ESG reporting, control variables and corporate performance. Model 3 is to examine the relationship between female board members, control variables and corporate performance. Lastly, Model 5 is to examine the relationship between ESG reporting, female board members, integration of ESG reporting and female board members, control variables and corporate performance. The equations of panel data analysis are given below.

$$PROFIT_{i,t} = \beta_0 + \beta_1 AGE_{i,t} + \beta_2 AUDIT_{i,t} + \beta_3 SIZE_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 AGE_{i,t} + \beta_3 AUDIT_{i,t} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 FEMALE_{i,t} + \beta_2 AGE_{i,t} + \beta 3AUDIT_{i,t} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 FEMALE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 AUDIT_{i,t} + \beta_5 SIZE_{i,t} + \varepsilon_{i,t} \quad (4)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 FEMALE_{i,t} + \beta_3 ESGi,t * FEMALE_{i,t} + \beta_4 AGE_{i,t} + \beta_5 AUDIT_{i,t} + \beta_6 SIZE_{i,t} + \varepsilon_{i,t} \quad (5)$$

Sensitivity analysis was used to test the relationship between three perspectives of ESG reporting (Environmental, Social, and Governance) separately and corporate performance as well as the influencing of ESG reporting interacted by female board members. Model 6 is to examine the relationship between control variables and corporate performance. Model 7 is to examine the relationship between Environmental, Social, and Governance reporting separately, control variables and corporate performance. Model 8 is to examine the relationship between female board members, control variables and corporate performance. Model 9 is to examine the relationship between Environmental, Social, and Governance reporting separately, female board members, control variables and corporate performance. Lastly, Model 10 is to examine the relationship between Environmental, Social, and Governance reporting separately, female board members, integration of ESG reporting and female board members, control variables and corporate performance. The equations of panel data analysis are given below.

$$PROFIT_{i,t} = \beta_0 + \beta_1 AGE_{i,t} + \beta_2 AUDIT_{i,t} + \beta_3 SIZE_{i,t} + \varepsilon_{i,t} \quad (6)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 EN_{i,t} + \beta_2 SO_{i,t} + \beta_3 CG_{i,t} + \beta_4 AGE_{i,t} + \beta_5 AUDIT_{i,t} + \beta_6 SIZE_{i,t} + \varepsilon_{i,t} \quad (7)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 FEMALE_{i,t} + \beta_2 AGE_{i,t} + \beta_3 AUDIT_{i,t} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t} \quad (8)$$

$$PROFIT_{i,t} = \beta_0 + \beta_1 EN_{i,t} + \beta_2 SO_{i,t} + \beta_3 CG_{i,t} + \beta_4 FEMALE_{i,t} + \beta_5 AGE_{i,t} + \beta_6 AUDIT_{i,t} + \beta_7 SIZE_{i,t} + \varepsilon_{i,t} \quad (9)$$

$$\begin{aligned} PROFIT = {} & \beta_0 + \beta_1 EN_{i,t} + \beta_2 SO_{i,t} + \beta_3 CG_{i,t} + \beta_4 FEMALE_{i,t} + \beta_5 EN_{i,t} * FEMALE_{i,t} \\ & + \beta_6 SO_{i,t} * FEMALE_{i,t} + \beta_7 CG_{i,t} * FEMALE_{i,t} + \beta_8 AGE_{i,t} + \beta_9 AUDIT_{i,t} + \beta_{10} SIZE_{i,t} + \varepsilon_{i,t} \quad (10) \end{aligned}$$

5. Results and Discussion

Table 2 shows the results of descriptive statistics. The mean of ESG reporting is 8.6478 average issues (SD = 2.0035), the minimum ESG reporting is 2 issues out of 11 issues and the maximum is 11 issues. It is clear that the listed company in Thailand discloses ESG information in its annual report. For the three perspectives of ESG, the mean of environmental (EN) reporting is 2.5698 average issues (SD = 1.3876), while the mean of social (SO) reporting is 2.9560 average issues (SD = 0.2495) and governance (GO) reporting is 3.1296 average issues (SD = 0.9480). Regarding the female board members, the average proportion of females in the total board is 20.61 percent (SD = 12.00). Some listed companies have no female board members (Min. = 0.00), while some have more females on the board than males (Max. = 0.63). For corporate performance, the mean ROA is 4.2511 percent (SD = 1.7457).

Table 2 Descriptive Statistics of the Variables

Variables	Min.	Max.	Mean	SD	Mediam
PROFIT (in percent)	–30.8060	35.1800	4.2511	1.7457	0.00
ESG	2.00	11.00	8.6478	2.0035	11.00
EN	0.00	4.00	2.5698	1.3876	4.00
SO	1.00	3.00	2.9560	0.2495	3.00
CG	1.00	4.00	3.1296	0.9480	4.00
FEMALE	0.00	0.63	0.2061	0.1200	0.10
AGE	1.00	137.00	33.4214	22.7022	30.00
AUDIT	0.00	1.00	0.8038	0.3973	1.00
SIZE	2.50	19.480	14.3402	2.21615	3.15

The correlation matrix Pearson's correlation in Table 3 shows no multicollinearity problem is apparent, and regression analysis results for Tolerance and Tolerance and Variance Inflation Factor (VIF) are tested separately. On examining correlations between all variables, the results show that PROFIT is positively correlated to ESG and FEMALE at 0.01 level. Within three perspectives of ESG, there is only EN that correlates with PROFIT at 0.01 level, while there are no correlations between SO, CG, and PROFIT at 0.05 level. Moreover, FEMALE also was positively correlated with ESG at 0.01 level.

Table 3 Correlation Matrix

Variable	PROFIT	EN	SO	CG	ESG	FEMALE	AGE	AUDIT	SIZE
PROFIT	1.00	0.139**	0.035	0.031	0.109**	0.161**	0.225**	–0.058	0.463**
EN	–	1.00	0.280**	0.301**	0.869**	0.116**	0.140**	0.148**	–0.006
SO	–	–	1.00	0.280**	0.440**	0.005	–0.023	–0.011	0.004
CG	–	–	–	1.00	0.706**	–0.048	0.049	0.058	0.047*
ESG	–	–	–	–	1.00	0.098**	0.119**	0.122**	0.029
FEMALE	–	–	–	–	–	1.00	–0.101**	–0.168**	–0.025**
AGE	–	–	–	–	–	–	1.00	0.083*	0.200**
AUDIT	–	–	–	–	–	–	–	1.00	0.041
SIZE	–	–	–	–	–	–	–	–	1.00

** shows significance at 0.01 level, and * shows significance at 0.05 level.

Table 4 Panel Analysis

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)
Constant	520.796	0.545	−3771.703	−2.148*	2544.324	2.004*	−1626.157	−0.829	−1388.000	−.707
ESG	–	–	538.009	2.935**	–	–	509.271	2.778**	472.583	2.566**
FEMALE	–	–	–	–	7566.244	2.414*	6952.775	2.222*	7552.920	2.403**
ESG∗FEM.	–	–	–	–	–	–	–	–	86.735	1.807*
AGE	75.043	4.571**	69.889	4.253**	73.025	4.456**	68.310	4.164**	69.037	4.213**
AUDIT	−2613.071	−2.841**	−2918.887	−3.169**	−2969.282	−3.197**	−3229.881	−3.475**	−3249.985	−3.501**
SIZE	231.697	13.814**	231.555	13.872**	223.975	13.155**	224.466	13.240**	225.115	13.294**
Year	Included		Included		Included		Included		Included	
R^2	0.240		0.248		0.246		0.253		0.256	
Adj. R^2	0.237		0.244		0.242		0.248		0.250	
F-value	83.269**		65.206**		64.289**		53.412**		45.182**	
Observation	795		795		795		795		795	

** shows significance at 0.01 level, and * shows significance at 0.05 level.

Table 5 Sensitivity Analysis

Variables	Model 6		Model 7		Model 8		Model 9		Model 10	
	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)	Coef.	t (sig)
Constant	520.796	0.545	–974.019	–0.219	2544.324	2.004*	547.490	0.122	–3000.232	–0.197
EN	–	–	1291.874	4.543**	–	–	1237.286	4.340**	3010.034	5.585**
SO	–	–	264.461	0.171	–	–	361.176	0.236	659.962	0.126
CG	–	–	–608.480	–1.489	–	–	–610.601	–1.497	–1159.274	–1.381
FEMALE	–	–	–	–	7566.244	2.414*	6343.702	0.2036*	11118.579	0.168
EN∗FEM.	–	–	–	–	–	–	–	–	8726.824	3.885**
SO∗FEM.	–	–	–	–	–	–	–	–	1448.363	0.064
CG∗FEM.	–	–	–	–	–	–	–	–	–2671.589	–0.748
AGE	75.043	4.571**	65.119	3.969**	73.025	4.456**	63.911	3.901**	62.384	3.833**
AUDIT	–2613.071	–2.841**	–3160.073	–3.438**	–2969.282	–3.197**	–3431.602	–3.702**	–3648.308	–3.930**
SIZE	231.697	13.814**	236.502	14.214**	223.975	13.155**	229.891	13.587**	235.415	13.968**
Year	Included		Included		Included		Included		Included	
Adj. R^2	0.237		0.255		0.242		0.258		0.270	
F-value	83.269**		46.335**		64.289**		40.467**		30.323**	
Observation	795		795		795		795		795	

** shows significance at 0.01 level, and * shows significance at 0.05 level.

Table 4 indicants the multiple regression results from the first to the fifth model. The R squared is from 0.240 to 0.256, and the adjusted R squared is from 0.237 to 0.250, showing that the models explain approximately 45.182 to 83.629 percent of the variance in the data. To test the first hypothesis, the findings of this study indicate that ESG can enhance PROFIT of listed companies in the SET at 0.01 level from the second, fourth, and fifth models. The positive impact of ESG reporting on corporate performance can be explained by stakeholder-agency theory. This is because ESG reporting is supposed to contribute to a reduction of information asymmetry, agency cost, and utility loss from the relationships between top managements and shareholders, and between top managements and other stakeholders. Aside from information asymmetry, conflicts of interest between top managements and all stakeholders are to be reduced. The result of this study is consistent with the results of previous related studies (Aboud & Diab, 2018; Albitar et al., 2020; Yoon et al., 2018). Therefore, this study supports H1.

To test the second hypothesis, the study finds that there is a significant positive impact of FEMALE on PROFIT at 0.05 level from the third, fourth, and fifth models. This is because female board members can increase the diversity of opinions and the quality of discussion related to decision-making that could potentially positively influence corporate performance (Adams & Ferreira, 2009; Husted & Sousa-Filho, 2019). Therefore, the listed companies are encouraged to have more females than males in boards, as the maximum ratio of females to total board size was 63.00 percent. The result of this study is consistent with the results of previous related studies (Agyemang-Mintah & Schadewitz, 2019; Albitar et al., 2020; Husted & Sousa-Filho, 2019). Therefore, this study supports H2.

To test the third hypothesis, using the fifth model in Table 4, this study finds that FEMALE moderates a positively significant relationship between ESG and PROFIT (Agyemang-Mintah & Schadewitz, 2019; Albitar et al., 2020). The results can be explained by stakeholder-agency theory, regarding how the corporation balances the relationship between top managements and shareholders, as well as the relationship between top managements and the other stakeholders by using female board members. Moreover, the more females increase the diversity of opinions and the quality of discussion related to the decision-making process, that is believed to add the quality and quantity of information disclosure and this could potentially have a positive influence on corporate performance (Adams & Ferreira, 2009; Husted & Sousa-Filho, 2019). Therefore, this study supports H3.

Furthermore, as can be seen from model 1 in Table 4, the study finds a significant positive relationship between AGE, SIZE, and PROFIT at 0.01 level, while there is a negative significant relationship between AUDIT and PROFIT at 0.01 level.

In Table 5, the sensitivity analysis of the main perspectives of ESG reporting separately (i.e. environmental, social, and governance), the study finds only environmental reporting positively influences the corporate performance of the listed companies in Thailand, while there is no significant correlation between social reporting or governance reporting and corporate performance. Regarding the female board members moderating the impacts of environmental, social, and governance reporting on corporate performance, the sensitivity analysis indicates that female board members moderate the relationship between environmental reporting and corporate performance. However, the study does not find that female board members would moderate the influence impacts of social and governance reporting on corporate performance.

6. Summary and Suggestions for Future Study

To answer the research questions of what was the level of ESG reporting of listed companies in Thailand from 2015 to 2019, and were there any possible influences of ESG reporting and female board members on corporate performance of the listed companies in Thailand, this study showed that there was a positive impact of ESG reporting on corporate performance of Thai 200 listed companies over the period 2015-2019 with unbalanced panel data. In addition, the study also found a positive impact of female board members on corporate performance. As an interacting factor of female board members, this study found a positive relationship between ESG reporting and corporate performance. By separating ESG reporting into its three perspectives (environmental, social, and governance reporting), the study found that only environmental reporting positively influenced corporate performance, while there was no relationship between social or governance reporting and corporate performance.

The study's findings provide several contributions and implications. In terms of theoretical contributions, the results demonstrate that stakeholder-agency theory can be used to explain the reason why ESG information is disclosed by Thai listed companies, although the disclosure is still voluntary reporting in Thailand. Based on the theory, it is conceptually defined as a tool to reduce information asymmetry and the extent of agency problems between top managements and a wide range of stakeholders. The study closed or at least decreased the research gap by analysis of the link between ESG reporting and corporate performance, with interaction by female board members. In terms of practical implications, top managements may encourage ESG reporting, especially environmental reporting, to enhance their corporate performance. The findings also emphasize the need to have ESG regulations to promote sustainable development in Thailand as well as in other countries.

However, this study also had some limitations. Although corporate performance is used in this study, several other corporate outcomes may be influenced by ESG reporting and female board members, such as firm value, reputation, market reaction, and economic value added. Return on asset is used as the proxy of corporate performance in this study, but several proxies are measured for corporate performance in previous studies, such as return on equity, Tobin's Q, and abnormal return. Finally, the study focused on only the Stock Exchange of Thailand, but excluded the alternative capital market in Thailand namely the Market for Alternative Investment where there are other listed companies. Therefore, to address the limitations of this study, one suggestion for future studies is to investigate ESG reporting of listed companies in the alternative capital market in Thailand using firm value and market reaction as the other corporate outcomes.

REFERENCES

Aboud, A., & Diab, A. (2018). The impact of social, environmental and corporate governance disclosures on firm value. *Journal of Accounting in Emerging Economies, 8*(4), 442–458. doi:10.1108/JAEE-08-2017-0079

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of financial economics, 94*(2), 291–309.

Agyemang-Mintah, P., & Schadewitz, H. (2019). Gender diversity and firm value: evidence from UK financial institutions. *International Journal of Accounting & Information Management, 27*(1), 2–26. doi:10.1108/IJAIM-06-2017-0073

Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR. *International Journal of Accounting & Information Management, 28*(3), 429–444. doi:10.1108/IJAIM-09-2019-0108

Almeyda, R., & Darmansya, A. (2019). The influence of environmental, social, and governance (ESG) disclosure on firm financial performance. *IPTEK Journal of Proceedings Series*(5), 278–290.

Aouadi, A., & Marsat, S. (2018). Do ESG Controversies Matter for Firm Value? Evidence from International Data. *Journal of Business Ethics, 151*(4), 1027–1047. doi:10.1007/s10551-016-3213-8

Arayssi, M., Dah, M., & Jizi, M. (2016). Women on boards, sustainability reporting and firm performance. *Sustainability Accounting, Management and Policy Journal, 7*(3), 376–401. doi:10.1108/SAMPJ-07-2015-0055

Ben-Amar, W., Chang, M., & McIlkenny, P. (2017). Board Gender Diversity and Corporate Response to Sustainability Initiatives: Evidence from the Carbon Disclosure Project. *Journal of Business Ethics, 142*(2), 369–383. doi:10.1007/s10551-015-2759-1

Birindelli, G., Chiappini, H., & Savioli, M. (2020). When do women on board of directors reduce bank risk? *Corporate Governance: The international journal of business in society, 20*(7), 1307–1327. doi:10.1108/CG-03-2020-0089

Boulouta, I. (2013). Hidden Connections: The Link Between Board Gender Diversity and Corporate Social Performance. *Journal of Business Ethics, 113*(2), 185–197. doi:10.1007/s10551-012-1293-7

Connelly, J. T., & Limpaphayom, P. (2004). Environmental Reporting and Firm Performance: Evidence from Thailand*. *The Journal of Corporate Citizenship*(13), 137–149.

Ekwueme, C. M., Egbunike, C. F., & Onyali, C. I. (2013). Benefits of triple bottom line disclosures on corporate performance: An exploratory study of corporate stakeholders. *Journal of Management and Sustainability, 3*(2), 201–230.

Eliwa, Y., Aboud, A., & Saleh, A. (2023). Board gender diversity and ESG decoupling: Does religiosity matter? *Business Strategy and the Environment*, 1–12. doi:https://doi.org/10.1002/bse.3353

Fernandez-Feijoo, B., Romero, S., & Ruiz-Blanco, S. (2014). Women on Boards: Do They Affect Sustainability Reporting? *Corporate Social Responsibility and Environmental Management, 21*(6), 351–364. doi:https://doi.org/10.1002/csr.1329

GRI. (2020). GRI Standards. Retrieved from https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/

Gulzar, M. A., Cherian, J., Hwang, J., Jiang, Y., & Sial, M. S. (2019). The Impact of Board Gender Diversity and Foreign Institutional Investors on the Corporate Social Responsibility (CSR) Engagement of Chinese Listed Companies. *Sustainability, 11*(2), 1–19. Retrieved from https://www.mdpi.com/2071-1050/11/2/307

Heinfeldt, J., & Curcio, R. (1997). Employee management strategy, stakeholder-agency theory, and the value of the firm. *Journal of financial and strategic decisions, 10*(1), 67–75.

Hill, C. W. L., & Jones, T. M. (1992). STAKEHOLDER-AGENCY THEORY. *Journal of management Studies, 29*(2), 131–154. doi:https://doi.org/10.1111/j.1467-6486.1992.tb00657.x

Hodkam, S. (2016). *The Study of Relationship between the Level of Sustainability Report Disclosure and Security Prices of Listed Companies in the Stock Exchange of Thailand*. (Master's Thesis). Burapha University, Saen Suk, Thailand,

Hossain, M., & Hammami, H. (2009). Voluntary disclosure in the annual reports of an emerging country: The case of Qatar. *Advances in Accounting, 25*(2), 255–265. doi:https://doi.org/10.1016/j.adiac.2009.08.002

Huang, C.-L., & Kung, F.-H. (2010). Drivers of environmental disclosure and stakeholder expectation: Evidence from Taiwan. *Journal of Business Ethics, 96*(3), 435–451.

Huaypad, S. (2019). The Relationship between the Quality of Social Responsibility Disclosure and Stock Price of Firms Listed in the Stock Exchange of Thailand. *Journal of Modern Management Science, 12*(2), 53–67. doi:https://doi.org/10.14456/jmms.2019.12

Husted, B. W., & Sousa-Filho, J. M. d. (2019). Board structure and environmental, social, and governance disclosure in Latin America. *Journal of Business Research, 102*(1), 220–227. doi:https://doi.org/10.1016/j.jbusres.2018.01.017

Islam, M. A., & Deegan, C. (2010). Media Pressures and Corporate Disclosure of Social Responsibility Performance Information: A Study of Two Global Clothing and Sports Retail Companies. *Accounting and business research, 40*, 131–148.

Jizi, M. (2017). The Influence of Board Composition on Sustainable Development Disclosure. *Business Strategy and the Environment, 26*(5), 640–655. doi:https://doi.org/10.1002/bse.1943

Joshi, P. L., & Gao, S. S. (2009). Multinational corporations' corporate social and environmental disclosures (CSED) on web sites. *International Journal of Commerce and Management, 19*(1), 27–44. doi:10.1108/10569210910939654

Li, Y., Gong, M., Zhang, X.-Y., & Koh, L. (2018). The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *The British Accounting Review, 50*(1), 60–75. doi:https://doi.org/10.1016/j.bar.2017.09.007

Marinova, J., Plantenga, J., & Remery, C. (2016). Gender diversity and firm performance: evidence from Dutch and Danish boardrooms. *The International Journal of Human Resource Management, 27*(15), 1777–1790. doi:10.1080/09585192.2015.1079229

Mathew, S., Ibrahim, S., & Archbold, S. (2016). Boards attributes that increase firm risk – evidence from the UK. *Corporate Governance, 16*(2), 233–258. doi:10.1108/CG-09-2015-0122

Naeem, N., Cankaya, S., & Bildik, R. (2022). Does ESG performance affect the financial performance of environmentally sensitive industries? A comparison between emerging and developed markets. *Borsa Istanbul Review*. doi:https://doi.org/10.1016/j.bir.2022.11.014

Orazalin, N. (2019). Corporate governance and corporate social responsibility (CSR) disclosure in an emerging economy: evidence from commercial banks of Kazakhstan. *Corporate Governance: The international journal of business in society, 19*(3), 490–507. doi:10.1108/CG-09-2018-0290

Rose, S., Spinks, N., & Canhoto, A. I. (2015). *Management Research: Applying the Principles* Routledge.

Sanni, M., Aliu, I. D., & Olanrewaju, Y. E. (2020). Board Characteristics and International Financial Reporting Standards (IFRS) Compliance among Nigerian Listed Companies: Mixed Method Approach. *Global Journal of Accounting, 6*(1), 24–40. Retrieved from http://gja.unilag.edu.ng/article/view/865

SET. (2017). GRI Standard. Retrieved from https://www.setsustainability.com/download/lmnyp1cfwdg8z59

SET. (2019). ESG Disclosure. Retrieved from http://www.setsustainability.com.

Slaper, T. F., & Hall, T. J. (2011). The Triple Bottom Line: What Is It and How Does It Work? *Indiana Business Review, 86*, 4–8.

Suttipun, M. (2021). The influence of board composition on environmental, social and governance (ESG) disclosure of Thai listed companies. *International Journal of Disclosure and Governance*, 1–12. doi:10.1057/s41310-021-00120-6

Suttipun, M., & Saefu, S. (2017). Investigation of sufficiency economy philosophy reporting in Thailand. *DLSU Business & Economics Review, 26*(2), 53–65.

Suttipun, M., & Sittidate, N. (2016). Corporate social responsibility reporting and operation performance of listed companies in the Stock Exchange of Thailand. *Songklanakarin Journal of Social Sciences and Humanities, 22*(1), 269–295.

Theodoulidis, B., Diaz, D., Crotto, F., & Rancati, E. (2017). Exploring corporate social responsibility and financial performance through stakeholder theory in the tourism industries. *Tourism Management, 62*, 173–188. doi:https://doi.org/10.1016/j.tourman.2017.03.018

UN. (2023). The United Nation: our work on the sustainable development goals in Thaliand. Retrieved from https://thailand.un.org/en/sdgs

Velte, P. (2016). Women on management board and ESG performance. *Journal of Global Responsibility, 7*(1), 98–109.

Wasiuzzaman, S., Ibrahim, S. A., & Kawi, F. (2022). Environmental, social and governance (ESG) disclosure and firm performance: does national culture matter? *Meditari Accountancy Research, ahead-of-print*(ahead-of-print). doi:10.1108/MEDAR-06-2021-1356

Yoon, B., Lee, J. H., & Byun, R. (2018). Does ESG Performance Enhance Firm Value? Evidence from Korea. *Sustainability, 10*(10), 3635–3652.

Yordudom, T., & suttipun, M. (2020). The Influence of ESG Disclosures on Firm Value in Thailand. *GATR Journal of Finance and Banking Review, 5*(3), 108–114. doi:10.35609/jfbr.2020.5.3(5)

Zamil, G. S., & Hassan, Z. (2019). Impact of environmental reporting on financial performance: Study of global Fortune 500 companies. *Indonesian Journal of Sustainability Accounting and Management, 3*(2), 109–118.