ADAPTING TO UNCERTAINTY: GENDER DIVERSITY IN BOARDROOMS AND ITS ROLE IN ENHANCING SUSTAINABLE CORPORATE GOVERNANCE AND ESG PERFORMANCE IN THE ERA OF COVID-19

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Abstract

This research investigates the role of women as a moderator variable in the relationship between governance and environmental, social, and governance (ESG) performance during the COVID-19 crisis. Using the sample of firms from five Association of Southeast Asian Nations (ASEAN) countries, the results show that the presence of women in a board structure has a positive impact on ESG performance during the normal era. However, the woman board members have not proven to strengthen the relationship between governance and ESG performance during the COVID-19 era. This could be caused by the fact that in the COVID-19 era, firms need to concentrate more on short-term profit to survive. However, we believe their presence will improve the company's reputation and speed up the firm's recovery during times of crisis.

Keywords: Signaling Theory, ESG, COVID-19, Diversity, Corporate Governance

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1. INTRODUCTION

In the last decade, business turbulence was not only caused by regulatory or competitive factors but also health and economic crises. Health factors, the COVID-19 pandemic in 2020, and the collapse of large companies such as Lehmann Brothers have opened the views of stakeholders to change their focus on sustainable corporate governance (SCG) (Naeem et al., 2022; Terjesen et al., 2015; Terjesen et al., 2009). During COVID-19, the Central Statistics Agency (*Badan Pusat Statistik*, *BPS*) noted that Indonesia experienced a contraction in economic growth of 2.07% causing more than 3 million people to lose their jobs (BPS, 2020). Apart from that, the Philippines' gross domestic product (GDP) decreased by 9.6% and Thailand by 6.1% (Bank of Thailand, 2021; Fiscal Planning and Reforms Bureau, 2022). In the tourism sector, Thailand previously ranked eighth in the world in terms of the number of global tourist arrivals with 40 million arrivals in 2019, but this decreased by 95% in 2020 due to the COVID-19 pandemic (Saxon et al., 2021). In this case, SCG is believed to be able to restore company performance in times of crisis and the trust of

stakeholders in the future. SCG is an approach to managing a company by considering the economic, social, and environmental impacts of its business activities (Naeem et al., 2022). It includes corporate strategies, policies, and practices designed to maximize long-term benefits for all stakeholders, including shareholders, employees, local communities, and the environment. With the company's high level of environment, social, and governance (ESG) activity, it will not only support the achievement of the Sustainable Development Goals (SDGs) 2030, but the company's reputation will also increase because stakeholders see that, amidst declining industrial performance, management still pays attention to the surrounding environment, both in economic, social, and governance aspects (Ghazali et al., 2023).

The question is to what extent has management managed the company by the wishes of shareholders and acted transparently regarding important information regarding events that occurred at the company? Signaling theory explains that shareholder suspicion and information asymmetry that occurs will give rise to conflict between management and shareholders, one of the dimensions of SCG is transparency and reporting, good SCG will make management act more transparently related to ESG aspects. So, it can be concluded that good SCG is a signal that management has acted transparently and according to the wishes of stakeholders (Gambetta, 2008; Naeem et al., 2022).

Managing companies that are responsible for ESG has become a crucial issue in the contemporary business world. SCG does not only cover financial aspects but also pays attention to the company's impact on the environment and surrounding communities. Previous studies show that companies that prioritize ESG can achieve long-term advantages which include improved financial performance and global competitiveness. Apart from that, investment decision-making is heavily influenced by intuition which leads to companies paying more attention to environmental issues, this can be a trigger for lower capital costs and affect the company's existence in the long term (Pacces, 2022).

SCG policies are heavily influenced by governance mechanisms, one of which is the board structure (Ghofar et al., 2022; Pacces, 2022). Companies with a balanced structure are believed to be more risk-averse and show greater commitment in choosing decisions to maximize owner wealth (Blickle et al., 2006; Wang, 2012). The role of women in board structures is crucial in sustainable governance practices. Previous studies show that the presence of women in top management can bring different perspectives and positively influence decision-making related to ESG issues. Khemakhem et al. (2023) and Nicolo et al. (2022) revealed that the presence of women on the board encourages company ESG disclosure and that they are suspected of preferring to consider long-term factors in decision-making. A company's reputation is also found to be better when it has a diverse board structure. The presence of women on the board is seen by stakeholders as an entity that is responsible and committed to social values. Apart from that, be Ouni et al. (2020) revealed, that companies that have a balance in the gender aspect tend to have higher return on equity (ROE) and return on assets (ROA), this shows that the presence of women helps companies achieve long-term financial excellence.

However, studies regarding the presence of women on boards and the implementation of ESG show different results. According to Adams and Ferreira (2009), it is believed that the presence of women on the board can influence strategic decision-making regarding ESG, by prioritizing long-term considerations. However, this is not always consistent across all industries or company contexts (Carter et al., 2003). The correlation between the presence of women on the board and financial performance also found mixed results. Ouni et al. (2020) stated that the representation of women on the board was able to influence the sensitivity of board members regarding issues related to ESG. In addition, companies that have an ESG orientation have a significant influence on performance, some companies have a high proportion of women on the board (Ouni et al., 2020). The findings of Manita et al. (2018) explain that the presence of women cannot significantly influence decision-making, strategic decision-making is only influenced if the proportion of women on the board is significant.

Erhardt et al. (2003) stated that the presence of women on the board can strengthen the integration of ESG in corporate culture and encourage social desires and considerations in decision-making. However, contextual factors and governance structures also play an important role in influencing corporate ESG culture and practices (Carter et al., 2003). It is important to remember that while the presence of women on boards can strengthen gender equality practices and create a more inclusive environment, overall organizational culture change requires involvement and commitment from all levels of management and staff (Carter et al., 2003; Catalyst, 1993). Therefore, it is important to understand that the impact of the presence of women on boards on ESG governance and implementation can be influenced by various contextual factors, and does not always produce uniform results across all cases or industries. A comprehensive approach is needed to understand the true impact.

This research aims to reconcile the inconsistent results of previous research by closing several gaps in the existing literature and accommodating the latest developments on the subject. Previous studies on corporate governance and ESG still lack empirical evidence in the context of developing countries (Naeem et al., 2022). So far, researchers have only focused on developed countries, such as America, Canada, Australia, and America (Ouni et al., 2020; Issa & Fang, 2019; Mirza et al., 2020; Zhuang et al., 2018), or other European countries such as Portugal as carried out by Carmo et al. (2022). It is still rare to explore this theme in the Association of Southeast Asian Nations (ASEAN)-5 countries (Ghazali et al., 2023). To the best of our knowledge, studies with ASEAN-5 countries data focus only on the relationship between ESG and economic growth issues (Ghazali et al., 2023; Naeem et al., 2022). Meanwhile, Korwatanasaku and Majoe (2021) explore the investments made by companies in ESG and performance. The ASEAN-5 countries are an interesting object for research because the countries included in the ASEAN-5 countries are developing countries that have the fastest economic growth among other

developing countries (Mahi et al., 2020). In terms of variable measurement, some previous studies used dummy variables to measure gender (Carmo, 2022), while other researchers used only one proxy to measure corporate social responsibility (CSR) variables, CSR disclosure (Hongming et al., 2020). Harjoto and Jo (2011) and Karim (2021) use investments made by companies in CSR activities. Yilmaz et al. (2020) and Sahasranamam et al. (2020) used logit regression but did not test the influence of governance and ESG during the crisis caused by COVID-19. This study used three environmental ESG indicators to measure these variables.

This study is relevant to contribute to the development of literature related to corporate governance in developing countries, especially in the five largest ASEAN countries. Moreover, studies of women's role in firms are still rare to observe in the context of developing countries. The role of women in business and other public areas is still reckoned as a problem in the social context. However, women may have a huge contribution to improving public and business performance in the context of ESG. Hence, this study provides evidence that women should be given more roles in business and social contexts.

Apart from observing panel data for 10 years (2013–2022), for robustness reasons, we also tested the influence of gender roles in the board of commissioners on the relationship between governance and ESG variables during the COVID-19 period (2020–2021). In this regard, we want to understand the role of gender during COVID-19 on governance and ESG policies in companies which might provide a different perspective during times of crisis. With company performance declining during the crisis, we wanted to know whether their behavior tends to focus more on improving short-term performance, or whether having a female board increases ESG activities in the hope that the company's long-term performance will improve.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology. Sections 4 and 5 presents the results and discusses them. Section 6 concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Signaling theory

In general, signaling theory explains problems in communication. The question is whether the party providing the information can convince the recipient of the information that the information conveyed is reality, and conversely whether the recipient of the information or signal can believe that the information can be trusted (Gambetta, 2008). In the financial context, signaling theory describes two parties, individuals and organizations that have unequal access to information (Connelly et al., 2011). In these conditions, the information giver must find a way to provide effective information (signals) to the recipient of the information, on the other hand, the information recipient must find a way to interpret the information (signals) well.

In the corporate context, the sender of information is understood as management, while the recipient of information is the party who needs the information outside the company, such as shareholders, creditors, and other stakeholders. Of course, the information conveyed by management regarding the company has many meanings that must be interpreted by stakeholders correctly as a basis for decision-making. On the other hand, conveying incorrect and incomplete information regarding important company events is associated with moral hazard for stakeholders (Bergh et al., 2014). The signals sent by management can reflect the quality of the company. Ross (1977) and Bhattacharya (1979), for example, explained that information regarding the company's debt and dividend ratio in financial reports, a proportional debt ratio, and management's ability to pay regular dividends in the long term are signals to stakeholders that the company has good quality. On the other hand, poor debt and dividend performance is a signal to shareholders that the company has poor quality. To convince potential investors, management needs to send a good signal to them to show that the company has good quality, the implementation of good governance and ESG management by regulations is a signal to potential investors that the company has been managed with the principles of fairness, transparency, and accountability.

2.2. Sustainable corporate governance and COVID-19

The uncertainty of the business environment forces management to transform rapidly towards more effective sustainable practices. Efficient and environmentally friendly governance guidelines and structures have been described by Zerbes (2020) and Ji et al. (2021). Making changes to the governance structure and operations of a company requires effective infrastructure, resources, and communication channels to overcome the challenges and dynamics of increasingly developing environmental issues. Apart from financial performance aspects, companies must pay more attention to sustainability factors and corporate governance structures (El-Kassar & Singh, 2019). This is not only to maintain environmental sustainability, but management needs to provide a positive signal to the market regarding their commitment and initiatives which have implications for the company's reputation (Bae et al., 2018; Taj, 2016). Therefore, companies must be able to develop effective strategies to send positive signals to stakeholders regarding sustainable governance performance. Positive signals will increase company performance and value in the long term, whereas negative signals reduce stock market prices and sales (Bae et al., 2018). On the other hand, Albuquerque et al. (2020) stated that shares of companies that have good environmental and social issues have higher value during times of crisis.

Several studies confirm that corporate governance contributes directly to the development of corporate strategy and an effective governance structure is claimed to make a positive contribution to the company's CSR strategy (Aksoy et al., 2020). On the other hand, Kansal et al. (2018) stated that companies that have a non-concentrated ownership structure tend to reduce their corporate sustainable performance (CSP), they focus on maximizing shareholder wealth rather than paying attention to other stakeholders.

The results of previous studies also state that good governance and implementation of ESG can improve company performance (Hasan et al., 2023). Hasan et al. (2023) argue that one of the duties of the audit committee is to supervise the reporting prepared by management. This reporting includes quantitative ones such as financial reports and qualitative ones such as ESG reports. According to agency theory, independent audit committee members tend to encourage management to increase disclosure activities, these disclosures include governance and ESG aspects (Hasan et al., 2023). Disclosure of good governance and ESG is a positive signal to stakeholders that the company has good quality. Based on the logic above, we formulate the following hypothesis:

H1: Corporate governance has a positive effect on corporate sustainable performance.

2.3. The role of gender diversity on boards

The presence of women on boards has colored corporate decision-making. Companies that have women on the board of commissioners tend to have higher efficiency and competitive advantages (Ghofar et al., 2022; Karim, 2021). Apart from that, the presence of women in the board structure also improves the company's reputation (Low et al., 2015). In this way, the company is seen as having implemented the principle of gender equality. The diversity of the board structure also provides more potential and quality job opportunities and provides better service compared to a board structure that is only for men (Byron & Post, 2016; Zhuang et al., 2018). Another positive aspect is that the female board of commissioners has a higher level of meeting attendance than men (Adams & Funk, 2012).

Previous research results prove that the presence of women in the board structure can influence the relationship between governance and CSP (Naeem et al., 2022). This argument is also supported by other research that CSP has a high association with the presence of women on the board because they can provide access and communication channels to needed resources compared to men (Cordeiro et al., 2020; Galbreath, 2018; Glass et al., 2016; Katmon et al., 2019). Apart from that, Terjesen et al. (2014) argue that the presence of women on the board can increase decision-making efficiency as measured by ROA and the Tobins Q index. In connection with the results of the above analysis, we formulate the following hypotheses:

H2: Board gender diversity has a positive relationship with corporate sustainable performance.

H3: Board gender diversity moderates the relationship between corporate governance and corporate sustainable performance.

3. RESEARCH METHODOLOGY

3.1. Data and sample

This research observes companies listed on the stock exchange markets of countries including ASEAN-5 countries (Indonesia, Malaysia, Singapore, the Philippines, and Thailand). We collect data from company websites in the form of annual reports published by them. Apart from that, we also got some data from the Revinitif Eikon database with an observation period of 10 years (2013–2022). Using unbalanced panel data, we obtained a total sampling of 2995 companies in the real estate, energy, industrial, consumer cyclical, noncyclical, and financial sectors. Taking into account the completeness of the data, Table 1 presents the distribution of data per country that we used as sampling:

Table 1. Total observation data

No.	*Country*	*No. of companies*	*Year (2013–2010)*	*Total observation data*
1	Indonesia	89	10	439
2	Malaysia	354	10	962
3	Singapore	37	10	546
4	Thailand	103	10	268
5	Philippines	181	10	780
Amount				2995

3.2. Operational definition of variables

Details of the variables and use of proxies used in this research are presented in Table 2.

Corporate social performance is a company's long-term sustainability performance as measured by three ESG activities (Formentini & Taticchi, 2016). This research measures CSP using the *Environmental pillar score*, *Social pillar score*, and *Governance pillar score*.

Sustainable corporate governance is a company's ability through governance practices to increase the positive impact and reduce the negative impact of all its activities in three aspects, namely, environmental, social, and economic (Naeem et al., 2022). In this study, governance is proxied by *Board specific skills*, *Audit board committee*, *Internal audit department reporting*, *Audit committee independence*, *Audit committee expertise*, *Board attendance*, *CEO-Chairman duality*, and *Policy board experience*. In this study, we test the influence of the relationship between governance variables and company ESG performance, following the test model:

$$Baseline\ Model Y_{ESGCombine} = \alpha + \beta_1 BSS + \beta_2 ABC + \beta_3 IADR + \beta_4 ACI + \beta_5 ACE + \beta_6 BA + \beta_7 CCD + \varepsilon_{it} \quad (1)$$

Cho et al. (2020) stated that companies should invest in the presence of women on the board as a form of improvement in ESG. With high ESG, it is hoped that the company's long-term performance will increase. This increase in performance is because stakeholders tend to be more loyal to companies that have better sustainability performance (Naeem et al., 2022). The measurement of the *Board gender diversity* variable in this study refers to Adams and Ferreira (2009) and Manita et al. (2018) with the percentage of women from the total board in the company. So, the research model to test the effect of board gender diversity on ESG performance is:

$$Model 1 Y_{ESGCombine} = \alpha + \beta_1 BGDIV + \varepsilon_{it} \quad (2)$$

Next, we examine the role of women in the board structure on the influence between governance and ESG performance variables. The following is the test model tested:

$$Baseline\ Model2Y_{ESGCombine} = \alpha + \beta_1 BSS * BGDIV + \beta_2 ABC * BGDIV + \beta_3 IADR * BGDIV + \beta_4 ACI * BGDIV + \beta_5 ACE * BGDIV + \beta_6 BA * BGDIV + \beta_7 CCD * BGDIV + \varepsilon_{it} \quad (3)$$

Furthermore, for reasons of robustness, we also tested the role of gender diversity in the board on the relationship between governance performance variables and ESG, which we broke down into three categories of variables, namely environmental performance, social performance, and governance performance during the COVID-19 period (2020–2021) and the total observation period (2013–2022). We did this because we wanted to understand the role of women in the relationship between governance during the economic crisis and apart from that, we also wanted to see that this role was more influential in any of the three categories of factors such as environmental pillars, social pillar, and governance pillar. So, the models tested are:

$$Baseline\ Model3Y_{Environment} = \alpha + \beta_1 BSS * BGDIV + \beta_2 ABC * BGDIV + \beta_3 IADR * BGDIV + \beta_4 ACI * BGDIV + \beta_5 ACE * BGDIV + \beta_6 BA * BGDIV + \beta_7 CCD * BGDIV + \varepsilon_{it} \quad (4)$$

$$Baseline\ Model4Y_{Social} = \alpha + \beta_1 BSS * BGDIV + \beta_2 ABC * BGDIV + \beta_3 IADR * BGDIV + \beta_4 ACI * BGDIV + \beta_5 ACE * BGDIV + \beta_6 BA * BGDIV + \beta_7 CCD * BGDIV + \varepsilon_{it} \quad (5)$$

$$Baseline\ Model5Y_{Governance} = \alpha + \beta_1 BSS * BGDIV + \beta_2 ABC * BGDIV + \beta_3 IADR * BGDIV + \beta_4 ACI * BGDIV + \beta_5 ACE * BGDIV + \beta_6 BA * BGDIV + \beta_7 CCD * BGDIV + \varepsilon_{it} \quad (6)$$

Table 2. Variable definitions and measurements

Variable	*Proxy*	*Definition*
Panel A: Dependent variable		
Environmental pillar score	*ENVP*	Measured by how well the company's best management system avoids environmental risk and capitalizes opportunities to generate long-term value.
Social pillar score	*SPS*	Measured by how companies generate the trust and loyalty of customers and society and their ability to generate long-term value.
Government pillar score	*GPS*	Measured by how well the company's system and processes and their capacity create best management practices as well as checks and balances to create long-term shareholder value.
Panel B: Moderating variables		
Board gender diversity	*BGDIV*	Percentage of women on the board.
Panel C: Independent variables		
Board specific skills	*BSS*	Percentage of board members have a background or strong in financial or accounting.
Audit board committee	*ABC*	Does the company have an audit board committee?
Internal audit department reporting	*IADR*	Is the internal audit department reporting to the audit committee or any explanation about the report in the annual report? If any report, we code with '1' if not any report then '0'.
Audit committee independence	*ACI*	Percentage of independent board members on the audit committee.
Audit committee expertise	*ACE*	Regarding the Sarbane-Oxley, the company must have three audit committees and at least one with financial expertise. If yes, we code with '1' if not, then '0'.
Board attendance	*BA*	Percentage of attendance at board member meetings
CEO-Chairman duality	*CCD*	Does the CEO simultaneously chair the board or has the chairman of the board been the CEO of the company?
Policy board experience	*PBE*	Does the company have a policy about the experience of its board members?

Next, we used the Eviews 12th edition application as a data testing tool in this study. Our initial step is to choose a testing model viz common effect model, fixed effect model, and random effect model. From the three models, we will choose which model is most appropriate to the research objectives. To determine the right model, we carried out three tests with the following criteria:

Table 3. Model coefficients

Test type	*Hypothesis*	*Testing criteria*
Chow test	H_0: Common effects model (CEM)	H_0: Rejected, if the p-value < α (with α 5%)
	H1: Fixed effect model (FEM)	
Hausman test (performed after Chow test)	H_0: Random effect model (REM)	H_0: Rejected, if the p-value < α (with α 5%)
	H1: Fixed effect model (FEM)	

If the Chow test results show a p-value > 0.05, which means that the selected model is the common effect model, then the Hausman test does not need to be carried out. However, in this research, the model chosen was the fixed effects model.

4. RESEARCH RESULTS

This research investigates the role of women's governance and ESG variables. In contrast to Naeem (2022) and Ghazali et al. (2023), we observe the ASEAN-5 countries. Apart from that, we also

carried out the Chow test and Hausman test to find the best model. The following is a presentation of descriptive data and the results of testing the Chow and Hausman test models in this study:

Table 4. Chow test results

Effects test	*Statistics*	*df*	*Prob.*
Cross-section F	9.763156	-757,232	0.0000
Chi-squared cross-section	6029.837515	757	0.0000

Table 5. Hausman test results

Test summary	*Chi-Sq. statistics*	*Chi-Sq. df*	*Prob.*
Random cross-section	58.775198	8	0.0000

Based on the Chow test and Hausman test, the p-value was < 0.05, namely 0.000. For this reason, the suitable model in this research is the fixed effect model.

Table 6. Statistical descriptive results

Description	*Singapore*	*Malaysia*	*Indonesia*	*Philippines*	*Thailand*
ESGCombine	5,530,382	4,490,712	4,707,458	4,268,996	5,043,811
Environment	5,596,244	4,842,700	5,203,194	4,476,194	5,690,148
Social	5,989,998	5,083,529	5,016,175	4,710,804	4,953,552
Governance	4,119,436	3,401,212	3,490,712	3,763,015	4,237,196
BGDIV	7,238,865	7,234,504	7,310,280	7,208,524	6,796,939

Table 6 shows the presentation of descriptive data in this study which consists of the average value of the combined ESG performance, environment pillar, social pillar, governance pillar, and the presence of women in each country. It can be seen from this data that the average presence of women on the board in Singapore and Malaysia occupies the highest position among the ASEAN-5 countries. This is by our expectations that Singapore and Malaysia are part of the British Commonwealth of Nations which are more open to the presence of women. The next positions, respectively, are occupied by the Philippines, Indonesia, and Thailand in terms of the average number of companies that have women in the board structure. In terms of ESG scores, Singapore also ranks first with the highest average score, followed in sequence by Indonesia, Malaysia, and others. This shows that as a developed country, Singapore has the highest market cap among other countries, it is appropriate that companies in this country have more resources to implement good ESG governance.

4.1. Baseline results

Table 7 presents panel regression results for the baseline model (Model 1). This test aims to test the influence of governance variables on ESG together, including (environmental, social, and governance pillars). By our alleged proposition, the majority of governance indicators have a significant influence on combined ESG, except for the *Board specific skills* and *Audit board committee* factors which produce p-values of 0.1332 and 0.7317. Next, the value of Adj. R^2 of this test is 69.81%. This shows that the indicator variables included in the testing model were able to influence the combined ESG variables by 69.81%, whereas 30.19% was explained by other variables outside the research model.

Table 7. Baseline test

Variable		*p-value*	*Hypotheses results*
X1	*Board specific skills*	0.1332	Not accepted
X2	*Audit board committee*	0.7317	Not accepted
X3	*Internal audit department reporting*	0.0000	Accepted
X4	*Audit committee independence*	0.0000	Accepted
X5	*Audit committee expertise*	0.0000	Accepted
X6	*Board attendance*	0.0000	Accepted
X7	*CEO-Chairman duality*	0.0000	Accepted
X8	*Policy board experience*	0.0000	Accepted
Goodness of fit model = 0.69814; Adj. R^2 = 69.81%.			

Next, we tested the second test model, namely the variable of the presence of women in the board structure on ESG performance together. In this test, we want to see to what extent the role of women in the board structure can influence ESG policy. Table 8 presents the test results:

Table 8. Board gender diversity variable test results

Variable		*Y*	*p-value*	*Hypothesis results*
		Constant		
Z	*Board gender diversity*	*BGDIV*	0.0000	Accepted
Goodness of fit model = 0.726; Adj. R^2 = 72.60%.				

The results of testing Model 2 for the *Board gender diversity* variable show a significant influence on the combined ESG variable with a p-value of 0.000. These results support Nguyen et al. (2023) and Ginglinger and Gentet-Raskopf (2021) that companies that have women in the board structure are found to have better ESG performance compared to board structures that do not have women. Karim (2021) argues that the presence of women increases companies' attention to ESG activities, especially on environmental and social pillar factors. The Adj. R^2 value in this test produces a figure of 72.6%. Based on Karim's (2021) argument, we continue testing Model 3 to prove whether the existence of women is indeed possible to influence governance variables on combined ESG. Table 9 shows the results of the Model 3 test.

Table 9. Moderation test results

	Variable	*p-value*	*Hypothesis results*
X1	*Board specific skills*	0.3013	Not accepted
X2	*Audit board committee*	0.0784	Not accepted
X3	*Internal audit department reporting*	0.0015	Accepted
X4	*Audit committee independence*	0.1737	Not accepted
X5	*Audit committee expertise*	0.1174	Not accepted
X6	*Board attendance*	0.3220	Not accepted
X7	*CEO-Chairman duality*	0.3185	Not accepted
X8	*Policy board experience*	0.3375	Not accepted
	Goodness of Fit model = 0.7369; Adj. R^2 = 73.69%.		

The proposition that the presence of women can strengthen the overall relationship of governance to composite ESG is not proven in this study. Governance indicators such as *Board specific skills* (*BSS*), *Audit committee expertise* (*ACE*), and *Policy board experience* (*PBE*) are not proven to be moderated by women in board structures on combined ESG. Only the *Internal audit department reporting* (*IADR*) factor is influenced by women in the board structure on combined ESG performance with a p-value of 0.0015 or less than 0.005. In testing Model 3, the Adj. R^2 value was 73.69%, which means that the indicator variables included in the testing model were able to influence the combined ESG variable by 73.69%, whereas 26.31% was explained by other variables outside the research model.

4.2. Robustness test using environmental, social, and governance performance indicators separately

Previous test results have proven that the presence of women in the board structure does not have a significant role in combined governance and ESG performance. Next, we want to see if the ESG performance factors consisting of the environment pillar, social pillar, and governance pillar are tested separately, and if different results are found. In the next testing procedure, we separated the ESG performance indicators separately, after which we tested the variable role of the presence of women in the board structure on governance and ESG performance. The testing we carried out was carried out in two stages, namely testing with observation data from 2013–2022 and data from the COVID-19 period (2020–2021). At this stage, we want to see the differences in women's roles during times of crisis caused by health factors such as COVID-19 and normal conditions. Does the proposition regarding the existence of women in times of crisis tend to prioritize long-term performance such as ESG or do they act logically by focusing on short-term performance or recovering profits for the current period?

Table 10 shows the test results for the 2013–2022 observation period in the fourth test model in this study:

Table 10. Baseline test 2

Y1: Constant; Social pillar score			
	Variable	*p-value*	*Hypothesis results*
X1	*Board specific skills*	0.8361	Not accepted
X2	*Audit board committee*	0.1091	Not accepted
X3	*Internal audit department reporting*	0.0001	Accepted*
X4	*Audit committee independence*	0.3494	Not accepted
X5	*Audit committee expertise*	0.0874	Not accepted
X6	*Board attendance*	0.3355	Not accepted
X7	*CEO-Chairman duality*	0.0055	Accepted*
X8	*Policy board experience*	0.3284	Not accepted
	Goodness of fit model = 0.7097; Adj. R^2 = 70.97%.		
Y2: Constant; Governance pillar score			
	Variable	*p-value*	*Hypothesis results*
X1	*Board specific skills*	0.6734	Not accepted
X2	*Audit board committee*	0.3724	Not accepted
X3	*Internal audit department reporting*	0.5756	Not accepted
X4	*Audit committee independence*	0.0369	Accepted*
X5	*Audit committee expertise*	0.7051	Not accepted
X6	*Board attendance*	0.9320	Not accepted
X7	*CEO-Chairman duality*	0.3191	Not accepted
X8	*Policy board experience*	0.8326	Not accepted
	Goodness of fit model = 0.7639; Adj. R^2 = 76.39%.		
Y3: Constant; Environmental pillar score			
	Variable	*p-value*	*Hypothesis results*
X1	*Board specific skills*	0.0241	Accepted*
X2	*Audit board committee*	0.0571	Not accepted
X3	*Internal audit department reporting*	0.0005	Accepted*
X4	*Audit committee independence*	0.7960	Not accepted
X5	*Audit committee expertise*	0.0097	Accepted*
X6	*Board attendance*	0.4786	Not accepted
X7	*CEO-Chairman duality*	0.4737	Not accepted
X8	*Policy board experience*	0.2630	Not accepted
	Goodness of fit model = 0.7071; Adj. R^2 = 70.71%.		

*Note: * Correlation is significant at the 0.05 level.*

The results of testing Model 4 show consistent results with the results of testing Model 3, overall, the presence of women in the board structure does not have a significant role in the performance of governance and the social pillar. Only the *IADR* and *CCD* factors have a significant influence with p-values of 0.0001 and 0.0055. Meanwhile, other factors, such as *ACE*, *BA*, *PBE*, and *BSS* produce p-values > 0.01, namely 0.847, 0.333, 0.328, and 0.836. In testing with social pillar, the Adj. R^2 value was found to be 70.97. Furthermore, testing Model 5, namely on the overall performance of the governance pillar, also found that the variable results of the presence of women in the board structure did not have a significant role in the governance and performance of the governance pillar. Only the *ACI* factor had significant results with a p-value of 0.036. While the value of Adj. R^2 has a fairly high value, namely 76.39%. Furthermore, the test results on the environment pillar show that several governance factors have a significant influence, such as *IADR*, *ACE*, and *BSS* with a p-value < 0.05, namely 0.0005, 0.0097, and 0.0241. Other factors do not support the hypothesis built with a p-value > 0.05. Adj. R^2 is 70.71%, which means that the variables in the research model have a significant effect of 70.71%, while 29.3% is explained by other variables outside the model.

Table 11. Moderation test results 2

Y1 Constant ***Social pillar score***			
	Variable	***p-value***	***Hypothesis results***
X1	*Board specific skills*	0.0586	Not accepted
X2	*Audit board committee*	0.4927	Not accepted
X3	*Internal audit department reporting*	0.1911	Not accepted
X4	*Audit committee independence*	0.9758	Not accepted
X5	*Audit committee expertise*	0.0689	Not accepted
X6	*Board attendance*	0.4575	Not accepted
X7	*CEO-Chairman duality*	0.2855	Not accepted
X8	*Policy board experience*	0.6072	Not accepted
	Goodness of fit model = 0.9046; Adj. R^2 = 90.46%.		
Y2 Constant ***Governance pillar score***			
	Variable	***p-value***	***Hypothesis results***
X1	*Board specific skills*	0.6943	Not accepted
X2	*Audit board committee*	0.0399	Accepted*
X3	*Internal audit department reporting*	0.5760	Not accepted
X4	*Audit committee independence*	0.5541	Not accepted
X5	*Audit committee expertise*	0.4289	Not accepted
X6	*Board attendance*	0.2646	Not accepted
X7	*CEO-Chairman duality*	0.7061	Not accepted
X8	*Policy board experience*	0.3646	Not accepted
	Goodness of fit model = 0.8412; Adj. R^2 = 84.12%.		
Y3 Constant ***Environmental pillar score***			
	Variable	***p-value***	***Hypothesis results***
X1	*Board specific skills*	0.7335	Not accepted
X2	*Audit board committee*	0.3189	Not accepted
X3	*Internal audit department reporting*	0.2680	Not accepted
X4	*Audit committee independence*	0.4588	Not accepted
X5	*Audit committee expertise*	0.3394	Not accepted
X6	*Board attendance*	0.4028	Not accepted
X7	*CEO-Chairman duality*	0.3326	Not accepted
X8	*Policy board experience*	0.3900	Not accepted
	Goodness of fit model = 0.9236; Adj. R^2 = 92.36%.		

*Note: * Correlation is significant at the 0.05 level.*

Table 11 above shows that overall, the presence of women in the board structure does not affect the relationship between governance performance and the environment, social or governance. These results can be concluded that whether there are women or not in the board structure, governance performance, and ESG performance remain good during the COVID-19 crisis using the 2020–2021 ASEAN-5 country test data. Only the *ABC* factor is influenced by gender diversity in the board structure on governance performance. The test model above produces Adj. R^2, quite high, namely 90.46% for the social pillar, and 84.12% for the governance pillar. Apart from that, Adj. R^2 is 92.36% for environmental performance, this can be concluded that all variables can influence the ESG variable separately by 92.36%, while the other 7.64% is influenced by other variables outside the model. Apart from that, combined ESG testing during the COVID-19 period also found insignificant results on all governance performance indicators.

5. DISCUSSION

This study investigates the role of women in the relationship between governance performance and ESG variables. We expand the testing by examining observation data during normal times (2013–2022) and the crisis period caused by COVID-19 (2020–2021). Apart from that, we tested the ESG performance variables together and separately with three indicators, namely ESG. We wanted to know which ESG factors were more strongly influenced by the presence of women in the board structure. Karim's (2021) argument which states that the presence of women increases environmental and social activities in companies is not proven in this study, this condition was found both during

the crisis (COVID-19) and during normal times. This is because, to be able to influence decision-making, the proportion of women in the board structure must be significant. According to the findings of Manita et al. (2018), for women to influence board decision-making, their number must be more than two in the board structure. A significant amount will influence their behavior in decision-making, they are considered more self-confident and active in decision-making (Manita et al., 2018). This argument is supported by our data regarding the average number of women in the board structure of the companies we sampled. The following is data on the average number of women in companies in the ASEAN-5 countries:

Table 12. Percentage of the number of women on the board

ASEAN-5 countries	*Women's Council presentation*
Singapore	7.23
Malaysia	7.23
Philippines	7.20
Indonesia	7.01
Thailand	6.79

It can be seen in Table 11 that the average number of women in companies per country is no more than 8%. The countries with the highest proportion of women are Singaporeans and Malaysians with the same value, namely 7.23%. Followed by the Philippines 7.20% and Indonesia and Thailand 6.79%. Even though the differences between countries are not much different, the average is considered very small or less than 10%. Therefore, it is natural that what Manita et al. (2018) proposed is proven in this study. Furthermore, testing data during the crisis caused by COVID-19 also proved that the presence of women did not significantly influence the role of women in governance and ESG performance during the crisis, both testing using ESG performance variables together or ESG indicators separately (ESG). A psychological study states that women are found to recover more quickly and control the situation in facing a crisis than men, this is because women tend to be open and discuss with other people if they face problems, from this openness women will get solutions and feel calmer in thinking (Frankenhaeuser, 1996). In this context, the pressure during the COVID-19 crisis is not enough to influence their decision-making, whether or not there are women in the board structure, they still comply with regulations and guidelines regarding governance and ESG. Torgler and Valev's (2006) findings strengthen this argument, according to them, women tend to be more obedient to regulations compared to men.

The research results show an interesting thing, the role of women in several governance and ESG performance indicators has different results. Both observation data for 2013–2022 and 2020–2021. The *IADR* and *CCD* indicators are significantly influenced by *BGDIV* on social performance in the 2013–2022 testing period. However, in the 2020–2021 testing period (COVID-19) these two indicators were not significantly influenced. In the governance pillar during the COVID-19 period, the *ABC* factor was significantly influenced, but during normal times, only the *ACI* factor was significantly influenced. In terms of environmental performance, the *ACE* and *IADR* factors had significant results, whereas, during the COVID-19 testing period, there were no governance factors that were influenced by the presence of women.

6. CONCLUSION

This study contributes theoretically to testing the applicability of signal theory. Based on this theory, the presence of women, governance performance, and ESG is a signal sent by management to stakeholders that they have managed the resources provided transparently, and accountably, and have attention to sustainability both in terms of environment, social, and governance. From the results of the investigation, this argument is not proven in the testing context. The presence or absence of women in the board structure does not have a significant relationship to governance and ESG performance as a form of good signal that management wants to send. In this case, management only focuses on complying with regulations and guidelines regarding governance and ESG, not on sending good signals to stakeholders. We base this assumption on the results of testing with data from the crisis period, the presence of women as a whole does not significantly influence the relationship between governance performance and ESG. This is proven by the fact that ESG performance (Table 6) during the COVID-19 period has generally decreased, we suspect that management is more focused on improving financial performance than ESG performance.

Does the presence of women on board structures have important implications for companies, industry, and regulators? The answer to this question might provide benefits for these stakeholders. Not only it may improve a company's reputation, but also the presence of women on the board is believed to have a psychological impact that accelerates recovery in the face of pressure. In addition, it is known that the presence of women on boards can contribute to increased ESG activities. This aspect is significant for the government because if companies improve their ESG performance by increasing investment in environmental management, social assistance, and other aspects, this can help the government overcome various problems related to these three aspects of ESG. Although sometimes ESG activities are considered a burden by management because they have the potential to affect short-term profits, research by Espinosa-Méndez et al. (2023) shows that increasing ESG activities can increase company value. This should be able to change management's view of initially seeing ESG as a cost into a long-term investment that can increase the company's reputation and value in the future.

We offer recommendations for companies and regulators in countries included in the ASEAN-5 countries. Even though the results of our investigation do not prove the role of women in governance and ESG performance, we still believe that their presence on the board can speed up recovery during times of crisis, which is psychologically supported by Frankenhaeseur (1996). Of course, this will provide benefits for companies in facing the crisis. On the other hand,

regulators need to regulate the increase in the proportion of women in the board of commissioners structure, based on the arguments of Manita et al. (2018) that women will tend to have a more active role when their proportion is more than two people in the board structure. If their influence is stronger, then we believe they will participate more in decision-making related to governance and ESG performance. This will of course support the government's program in achieving the SDGs 2030.

However, this study only uses governance performance indicators in the supervisory function, such as board and audit committee factors. Including other governance measures such as internal audit, audit committee proportion, and ownership structure may provide different results. Moreover, in the aspect of women's existence, we only measure their existence, without looking at aspects of educational background, experience, and level of education. Hence future research may look more at how the qualities of women may improve the performance of ESG rather than only observing their presence.

REFERENCES

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. https://doi.org/10.1016/j.jfineco.2008.10.007

Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter? *Management Science, 58*(2), 219–235. https://doi.org/10.1287/mnsc.1110.1452

Aksoy, M., Yilmaz, M. K., Tatoglu, E., & Basar, M. (2020). Antecedents of corporate sustainability performance in Turkey: The effects of ownership structure and board attributes on non-financial companies. *Journal of Cleaner Production, 276*, Article 124284. https://doi.org/10.1016/j.jclepro.2020.124284

Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). The resiliency of environmental and social stocks. *The Review of Corporate Finance Studies, 9*(3), 593–621. https://doi.org/10.1093/rcfs/cfaa011

Badan Pusat Statistik (BPS). (2020). *Statistical yearbook of Indonesia 2020*. Sea-Delt. https://seadelt.net/Asset/Source/Document_ID-462_No-01.pdf

Bae, S. M., Masud, M. A. K., & Kim, J. D. (2018). A cross-country investigation of corporate governance and corporate sustainability disclosure: A signaling theory perspective. *Sustainability, 10*(8), Article 2611. https://doi.org/10.3390/su10082611

Bank of Thailand. (2021). *Thailand's economic conditions in 2021* (Annual economic report). https://www.bot.or.th/content/dam/bot/documents/en/thai-economy/state-of-thai-economy/annual-report/annual-econ-report-en-2021.pdf

Bergh, D. D., Connelly, B. L., Ketchen, D. J., & Shannon, L. M. (2014). Signalling theory and equilibrium in strategic management research: An assessment and a research agenda. *Journal of Management Studies, 51*(8), 1334–1360. https://doi.org/10.1111/joms.12097

Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand" fallacy. *The Bell Journal of Economics, 10*(1), 259–270. https://doi.org/10.2307/3003330

Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology, 55*(2), 220–233. https://doi.org/10.1111/j.1464-0597.2006.00226.x

Byron, K., & Post, C. (2016). Women on boards of directors and corporate social performance: A meta-analysis. *Corporate Governance: An International Review, 24*(4), 428–442. https://doi.org/10.1111/corg.12165

Carmo, C., Alves, S., & Quaresma, B. (2022). Women on boards in Portuguese listed companies: Does gender diversity influence financial performance? *Sustainability, 14*(10), Article 6186. https://doi.org/10.3390/su14106186

Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review, 38*(1), 33–53. https://doi.org/10.1111/1540-6288.00034

Catalyst. (1993). *Women on corporate boards: The challenge of change*. https://catalyst.org/wp-content/uploads/2019/01/women_on_corporate_boards_the_challenge_of_change.pdf

Cho, Y., Kim, S., You, J., Moon, H., & Sung, H. (2020). Application of ESG measures for gender diversity and equality at the organizational level in a Korean context. *European Journal of Training and Development, 45*(4–5), 346–365. https://doi.org/10.1108/EJTD-05-2020-0090

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1), 39–67. https://doi.org/10.1177/0149206310388419

Cordeiro, J. J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: The moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment, 29*(3), 1127–1144. https://doi.org/10.1002/bse.2421

El-Kassar, A.-N., & Singh, S. K. (2019). Green innovation and organizational performance: The influence of big data and the moderating role of management commitment and HR practices. *Technological Forecasting and Social Change, 144*, 483–498. https://doi.org/10.1016/j.techfore.2017.12.016

Espinosa-Méndez, C., Maquieira, C. P., & Arias, J. T. (2023). The impact of ESG performance on the value of family firms: The moderating role of financial constraints and agency problems. *Sustainability, 15*(7), Article 6176. https://doi.org/10.3390/su15076176

Fiscal Planning and Reforms Bureau. (2022). *2021 Annual fiscal report*. Development Budget Coordination Committee. https://www.dbm.gov.ph/images/FY-2021-Annual-Fiscal-Report.pdf

Formentini, M., & Taticchi, P. (2016). Corporate sustainability approaches and governance mechanisms in sustainable supply chain management. *Journal of Cleaner Production, 112*, 1920–1933. https://doi.org/10.1016/j.jclepro.2014.12.072

Frankenhaeuser, M. (1996). Stress and gender. *European Review, 4*(4), 313–327. https://doi.org/10.1002/(SICI)1234-981X(199610)4:4%3C313::AID-EURO139%3E3.0.CO;2-Z

Galbreath, J. (2018). Do boards of directors influence corporate sustainable development? An attention-based analysis. *Business Strategy and the Environment, 27*(6), 742–756. https://doi.org/10.1002/bse.2028

Gambetta, D. (2008). Signaling theory and its applications. *L'annuaire Du Collège de France, 108*, 895–896. https://doi.org/10.4000/annuaire-cdf.264

Ghazali, N. S., Mohd Daud, S. N., & Ismail, N. H. (2023). The impact of environmental, social, and governance (ESG) on the economic growth of ASEAN-5 countries. *International Journal of Research — GRANTHAALAYAH, 11*(6), 45–65. https://doi.org/10.29121/granthaalayah.v11.i6.2023.5194

Ghofar, A., Muhammad, M., Rasli, A., Narullia, D., & Prestianawati, S. A. (2022). An investigation into factors affecting corporate risk management in ASEAN-4 countries. *Cogent Business & Management, 9*(1), Article 2135204. https://doi.org/10.1080/23311975.2022.2135204

Ginglinger, E., & Gentet-Raskopf, C. (2021). *Women directors and E&S performance: Evidence from board gender quotas* (European Corporate Governance Institute — Finance Working Paper No. 760/2021). https://doi.org/10.2139/ssrn.3832100

Glass, C., Cook, A., & Ingersoll, A. R. (2016). Do women leaders promote sustainability? Analyzing the effect of corporate governance composition on environmental performance. *Business Strategy and the Environment, 25*(7), 495–511. https://doi.org/10.1002/bse.1879

Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics, 100*(1), 45–67. https://doi.org/10.1007/s10551-011-0772-6

Hasan, S. M., Hossain, S. A., Islam, R., & Hasan, M. M. (2023). Finance and banking corporate governance and firms' performance: Evidence from Dhaka Stock Exchange. *Indian Journal of Finance and Banking, 13*(1), 28–38. https://doi.org/10.46281/ijfb.v13i1.1947

Hongming, X., Ahmed, B., Hussain, A., Rehman, A., Ullah, I., & Khan, F. U. (2020). Sustainability reporting and firm performance: The demonstration of Pakistani Firms. *SAGE Open, 10*(3). https://doi.org/10.1177/2158244020953180

Issa, A., & Fang, H.-X. (2019). The impact of board gender diversity on corporate social responsibility in the Arab Gulf states. *Gender in Management, 34*(7), 577–605. https://doi.org/10.1108/GM-07-2018-0087

Ji, X., Chen, X., Mirza, N., & Umar, M. (2021). Sustainable energy goals and investment premium: Evidence from renewable and conventional equity mutual funds in the Euro zone. *Resources Policy, 74*, Article 102387. https://doi.org/10.1016/j.resourpol.2021.102387

Kansal, M., Joshi, M., Babu, S., & Sharma, S. (2018). Reporting of corporate social responsibility in central public sector enterprises: A study of post mandatory regime in India. *Journal of Business Ethics, 151*(3), 813–831. https://doi.org/10.1007/s10551-016-3253-0

Karim, S. (2021). Do women on corporate boardrooms influence remuneration patterns and socially responsible practices? Malaysian evidence. *Equality, Diversity and Inclusion, 40*(5), 559–576. https://doi.org/10.1108/EDI-07-2020-0213

Katmon, N., Mohamad, Z. Z., Norwani, N. M., & Al Farooque, O. (2019). Comprehensive board diversity and quality of corporate social responsibility disclosure: Evidence from an emerging market. *Journal of Business Ethics, 157*(2), 447–481. https://doi.org/10.1007/s10551-017-3672-6

Khemakhem, H., Arroyo, P., & Montecinos, J. (2023). Gender diversity on board committees and ESG disclosure: evidence from Canada. *Journal of Management and Governance, 27*(4), 1397–1422. https://doi.org/10.1007/s10997-022-09658-1

Korwatanasaku, U., & Majoe, A. (2021). Environmental, social, and governance investment in emerging markets: A case study of firms in ASEAN. *Interdisciplinary Journal of International Affairs, 2*(1), 8–16. https://wimaya.upnjatim.ac.id/index.php/wimaya/article/view/128

Low, D. C. M., Roberts, H., & Whiting, R. H. (2015). Board gender diversity and firm performance: Empirical evidence from Hong Kong, South Korea, Malaysia and Singapore. *Pacific Basin Finance Journal, 35*, 381–401. https://doi.org/10.1016/j.pacfin.2015.02.008

Mahi, M., Phoong, S. W., Ismail, I., & Isa, C. R. (2020). Energy-finance-growth nexus in ASEAN-5 countries: An ARDL bounds test approach. *Sustainability, 12*(1), Article 5. https://doi.org/10.3390/su12010005

Manita, R., Bruna, M. G., Dang, R., & Houanti, L. (2018). Board gender diversity and ESG disclosure: Evidence from the USA. *Journal of Applied Accounting Research, 19*(2), 206–224. https://doi.org/10.1108/JAAR-01-2017-0024

Mirza, N., Naqvi, B., Rahat, B., & Rizvi, S. K. A. (2020). Price reaction, volatility timing and funds' performance during Covid-19. *Finance Research Letters, 36*, Article 101657. https://doi.org/10.1016/j.frl.2020.101657

Naeem, M. A., Karim, S., Nor, S. M., & Ismail, R. (2022). Sustainable corporate governance and gender diversity on corporate boards: Evidence from COVID-19. *Economic Research-Ekonomska Istrazivanja, 35*(1), 5824–5842. https://doi.org/10.1080/1331677X.2022.2038649

Nguyen, P.-H., Nguyen, L.-A. T., Pham, H.-A. T., & Pham, M.-A. T. (2023). Breaking ground in ESG assessment: Integrated DEA and MCDM framework with spherical fuzzy sets for Vietnam's wire and cable sector. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(3), Article 100136. https://doi.org/10.1016/j.joitmc.2023.100136

Nicolò, G., Zampone, G., Sannino, G., & De Iorio, S. (2022). Sustainable corporate governance and non-financial disclosure in Europe: Does the gender diversity matter? *Journal of Applied Accounting Research, 23*(1), 227–249. https://doi.org/10.1108/JAAR-04-2021-0100

Ouni, Z., Mansour, J. B., & Arfaoui, S. (2020). Board/executive gender diversity and firm financial performance in Canada: The mediating role of environmental, social, and governance (ESG) orientation. *Sustainability, 12*(20), 1–17. https://doi.org/10.3390/su12208386

Pacces, A. M. (2022). *Sustainable corporate governance: The role of the law* (European Corporate Governance Institute — Law Working Paper No. 550/2020). https://doi.org/10.2139/ssrn.3697962

Ross, S. A. (1977). Determination of financial structure: The incentive-signalling approach. *The Bell Journal of Economics, 8*(1), 23–40. https://doi.org/10.2307/3003485

Saxon, S., Sodprasert, J., & Sucharitakul, V. (2021). *Reimagining travel: Thailand tourism after the COVID-19 pandemic*. McKinsey & Company. https://shorturl.at/jHKNY

Sahasranamam, S., Arya, B., & Sud, M. (2020). Ownership structure and corporate social responsibility in an emerging market. *Asia Pacific Journal of Management, 37*(4), 1165–1192. https://doi.org/10.1007/s10490-019-09649-1

Taj, S. A. (2016). Application of signaling theory in management research: Addressing major gaps in theory. *European Management Journal, 34*(4), 338–348. https://doi.org/10.1016/j.emj.2016.02.001

Terjesen, S., Aguilera, R. V., & Lorenz, R. (2015). Legislating a woman's seat on the board: Institutional Factors driving gender quotas for boards of directors. *Journal of Business Ethics, 128*(2), 233–251. https://doi.org/10.1007/s10551-014-2083-1

Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review, 17*(3), 320–337. https://doi.org/10.1111/j.1467-8683.2009.00742.x

Torgler, B., & Valev, N. T. (2006). *Women and illegal activities: Gender differences and women's willingness to comply over time* (Andrew Young School of Policy Studies Research Paper No. 06-56). https://doi.org/10.2139/ssrn.904653

Wang, C.-J. (2012). Board size and firm risk-taking. *Review of Quantitative Finance and Accounting, 38*(4), 519–542. https://doi.org/10.1007/s11156-011-0241-4

Yilmaz, M. K., Aksoy, M., & Tatoglu, E. (2020). Does the stock market value inclusion in a sustainability index? Evidence from Borsa Istanbul. *Sustainability, 12*(2), Article 483. https://doi.org/10.3390/su12020483

Zerbes, I. (2020). A Union that strives for more [Editorial]. *European Criminal Law Review, 10*(3), 253–254. https://doi.org/10.5771/2193-5505-2020-3-253

Zhuang, Y., Chang, X., & Lee, Y. (2018). Board composition and corporate social responsibility performance: Evidence from Chinese public firms. *Sustainability, 10*(8), Article 2752. https://doi.org/10.3390/su10082752