Article Type: Research Paper

Shariah board governance and sustainability performance: analysis of sharia banking in Indonesia

Novia Dwi Puspitasari and Rahmatina Awaliah Kasri

AFFILIATION:
Department of Economics, Faculty of Economics and Business, Universitas Indonesia, West Java, Indonesia

*CORRESPONDENCE:
noviadwipuspitasari@gmail.com

THIS ARTICLE IS AVALILABLE IN:
http://journal.umy.ac.id/index.php/esp

DOI: 10.18196/jesp.v24i2.20133

CITATION:
Puspitasari, N. D., & Kasri, R. A. (2023). Shariah board governance and sustainability performance: analysis of sharia banking in Indonesia. *Jurnal Ekonomi & Studi Pembangunan, 24*(2), 458-478.

ARTICLE HISTORY
Received:
04 Oct 2023
Revised:
10 Oct 2023
21 Oct 2023
Accepted:
31 Oct 2023

Abstract: This study aims to investigate the relationship between sharia governance and sustainability performance in the Indonesian Islamic banking industry. Sharia governance is measured by the sharia supervisory board (SSB) score and the individual attributes of its members (size, number of meetings, educational background, and diversity). Sustainability performance (SP) is proxied by its economic, environmental, and social dimensions, as defined by the Global Reporting Initiative (GRI) framework. Secondary data from 2010—2020 company reports are used and analyzed using manual content analysis. Panel data regression is also employed to test the hypotheses and identify which individual attributes of the SSB influence sustainability performance. The results show that the SSB has a positive and significant effect on Indonesia's overall SP of Islamic banking. Among the individual attributes, the frequency of SSB meetings has a positive and significant effect on overall SP, while the diversity of SSB members negatively affects economic and social SP. Meanwhile, SSB member's size and educational background do not affect overall SP. The findings are expected to enhance understanding of Islamic bank's development and approaches to addressing sustainability-related issues of Islamic bank. This study also contributes as consideration in the improvement of standard practices or the current implementation of sharia governance in Indonesia and to promote sustainable operations through Islamic corporate governance.

Keywords: Corporate Governance; Sharia Governance; Sharia Supervisory Board; Sustainability Performance

JEL Classification: G21; G28; G34; Q56

Introduction

As the issue of corporate governance (CG) is still an interesting topic to be studied, the issue of sustainability or corporate sustainability is also a topic that has increased attention globally. A company's performance is no longer judged solely by its profits but also by its resilience in facing the economic crisis and uncertainty. In this case, sustainability performance is important for the company to be able to survive in the long term (Chabowski et al., 2010; Goyal et al., 2013). Sustainable growth as a long-term goal is an important pillar that must be owned by companies including Islamic Financial Institutions (IFI). Islamic banking (IB) as the largest IFI is known as a company that is considered more stable when facing a crisis with its unique characteristics

(Safiullah, 2021). One of the unique characteristics of IB is the the Shariah Supervisory Board (SSB), which is mandatory for all sharia-compliant banks and serves as a key differentiator from conventional banking.

The SSB forms an additional layer of governance in IB, alongside with the Board of Directors, Board of Commissioners, and other committees resulting in a "multi-layer governance" structure (Abdelsalam, Dimitropoulos, Elnahass, & Leventis, 2016; Almutairi & Quttainah, 2017; Mollah & Zaman, 2015; Safiullah & Shamsuddin, 2018; Shibani & De Fuentes, 2017). The SSB's primary function is to ensure adherence to sharia principles in all sharia banking operations. By fulfilling its role, the SSB influences and shapes managerial behavior through its inclusion in the company's decision-making management framework, ultimately impacting company performance (Ghayad, 2008; Nomran & Haron, 2019; Quttainah & Almutairi, 2016). Therefore, it is crucial to investigate the relationship between sharia governance and sustainability performance, particularly to assess whether IB's sharia compliant practices contribute to achieving sustainability performance.

Previous research has proven that the roles of supervision and construction of SSBs have a positive impact on IB performance (Alam, Islam, & Runy, 2021; Almutairi & Quttainah, 2017; Mollah & Zaman, 2015; Nomran & Haron, 2020). SSB construction includes special characteristics or attributes of SSB such as size or number of members, composition, qualifications, education, and special knowledge, both related to Islamic laws and finance and accounting. Many studies related to the relationship between corporate governance and sustainability have been carried out. However, the relationship between sharia governance and sustainability performance in IB is still unver-researched (Jan, Lai, & Tahir, 2021). This study strives to fill the gap by investigating the relationship between sharia governance and sustainability performance (SP) in Indonesian Islamic Banking.

In the recent yearss, Indonesia has committed to implementing sustainable development. To support this sustainable development strategy, The Indonesian Financial Services Authority (OJK) has issued a roadmap for sustainable finance aimed at accelerating the implementation of environmental, social, and governance principles in the financial industry. As a legal basis, OJK has released regulation number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Institutions, Issuers, and Public Companies. This regulation mandates financial institutions, including Islamic banks, to develop Sustainable Finance Action Plans (Rencana Aksi Keuangan Berkelanjutan/RAKB) which must be reported separately from their annual reports through Sustainability Reports. These reports highlight the institution's efforts and progress toward incorporating sustainability principles into its business practices.

With these perspectives, this study aims to investigate the relationship between sharia governance and sustainability performance (SP) in Indonesia's Islamic banking industry. To achieve the research objective, this study uses a quantitative research method in which panel data regression is analyzed. Sharia governance is measured by the Sharia Supervisory Board (SSB) score and their individual characteristics (size, number of meetings, educational background, and diversity of SSB members). Meanwhile, sustainability performance (SP) is proxied by its economic, environmental, and social dimensions of sustainability as defined by the Global Reporting Initiative (GRI) framework. The secondary data is collected from company reports for the years 2010—2020 and analyzed using manual content analysis techniques. The findings are expected to contribute to a better understanding of the development of Islamic banks and address sustainability-related issues.

To proceed with this study, this paper is structured as follows; Section one provides an introduction to the study, while section two reviews previous literature on corporate governance, Islamic corporate governance, and sustainability performance, and subsequently develops relevant hypotheses. Section three explains the data, empirical model, variable definitions, and model measurement. Section four reports and discusses the empirical results. Finally, section five discusses the conclusion and recommendations of the paper.

Sharia governance is an internal mechanism that ensures companies adhere to Sharia principles in all operational and business activities, ultimately leading to the achievement of maqasid Sharia as the main goal (Choudhury & Alam, 2013). The attributes of governance play an important role in the governance mechanism in Islamic banking (Grassa & Matoussi, 2014). The shariah governance function is carried out with the existence of a shariah supervisory board (SSB) in the governance structure of Islamic financial institutions. The SSB is crucial in ensuring that the institution's operations and financial products comply with Islamic principles and are in line with Shariah guidelines. The important role of SSB in the Islamic corporate governance mechanism makes the attributes or characteristics of SSB important to consider. In particular, Alam et al. (2021) stated that the composition and formation of SSB members had a positive impact on the development of fatwas and products, sharia decision-making, institutional performance, and the quality of sharia compliance. It was also added that SSB members who have good reputations will help Islamic banking improve the quality of sharia governance, operational services, performance, and disclosure required by Islamic banking. SSB is also assessed as a factor that can influence and shape managerial behavior where SSB is included in the management framework of corporate decision-making (Ghayad, 2008; Nomran & Haron, 2019; Quttainah & Almutairi, 2016).

Corporate sustainability is a concept that is increasingly getting industry attention globally in line with the increasing awareness of the importance of sustainability for the company's business (Shad, Lai, Shamim, & McShane, 2020). Based on the Global Reporting Initiative (GRI) framework, corporate sustainability has three dimensions, namely economic, environmental, and social, all three of which are equally important in sustainable development. Labuschagne & Brent (2006) defines sustainable performance (SP) as the process of aligning business strategies and activities with the needs of the company and stakeholders while preserving, maintaining, and enhancing the human and natural resources that will still be required in the future. The increasing awareness and understanding of sustainability among stakeholders have an impact on organizations, leading them to incorporate sustainability aspects into corporate policies and strategies (Chabowski et al., 2010; Barin Cruz et al, 2006; Jan et al., 2021). Stakeholders are no longer only focused on the company's financial performance but are also starting to consider the company's sustainability performance. Crisis conditions increasingly make stakeholders aware that the resilience and sustainability of the company's business are more important to ensure long-term success (Aras & Crowther, 2008).

Sustainability Performance measures the extent to which a company incorporates sustainability aspects, namely economic, environmental, and social factors, as well as governance factors, into its business operations, which ultimately have an impact on the company and society (Artiach, Lee, Nelson, & Walker, 2010). SP measure company performance closely related to implementing good corporate governance (GCG). SP is very dependent on the quality of CG because effective CG implementation will maintain stakeholders' trust (Hussain, Rigoni, & Orij, 2018; Tjahjadi et al., 2021;Tseng et al., 2019). Krechovská (2014) stated that the implementation of CG will impact sustainability performance, including economic, social, and environmental welfare. Another impact of the implementation of CG is an increase in corporate value and CSR as an important instrument in the development of sustainability performance (Jaimes-Valdez, Carlos, & Jacobo-Hernandez, 2016; Klettner, Clarke, & Boersma, 2014; Matten & Moon, 2008; Sharma & Khanna, 2014).

Research related to the relationship between governance and company performance has been conducted extensively, but studies specifically focusing on the banking industry, especially Islamic banking, are still relatively limited and have yielded varied findings (Hakimi et al., 2018; Mollah & Zaman, 2015; Nomran et al., 2018). Abdel-Baki & Leone Sciabolazza (2014) conducted research and found that corporate governance positively influences the efficiency performance of Islamic banking, where poor governance implementation would expose the company to greater risks. Other studies found that Shariah board characteristics have a positive impact on the financial performance of Islamic banking, using variables such as ROA, ROE, and other financial performance indicators (Farag, Mallin, & Ow-Yong, 2018; Mollah & Zaman, 2015; Nawaz & Haniffa, 2017; Rahim, Mahat, Nassir, & Yahya, 2015).

One critical review mentioned by Nomran & Haron (2019) is that the Shariah board characteristics used in previous studies only focus on the size or number of Shariah board members. Almutairi & Quttainah (2017) and Hakimi et al. (2018) addressed this research gap by including the education and expertise characteristics of the Shariah board as independent variables and found that both factors positively impact the financial performance of Islamic banking. However, Ajili & Bouri (2018) did not find a significant impact of the education and expertise characteristics of the Shariah board on financial performance in their research. Mezzi (2018) included the existence of a central Shariah board as an independent variable and found a positive impact on the efficiency of Islamic banking.

Nomran et al. (2018) conducted a more comprehensive study in Malaysia by simultaneously considering several Shariah board characteristics. They found that size, cross-membership, and reputation have a positive impact on the financial performance of Islamic banking, while education qualifications, experience, and changes in the composition of the Shariah board have a negative impact. Jan et al. (2021) mentioned that no specific research has yet linked the Shariah board with sustainability performance. In the same study, Jan et al. (2021) provided an Islamic governance framework to assess sustainability performance in Islamic financial institutions, which serves as one of the references for this current research.

Corporate Governance and Sustainability Performance

The relationship between governance and sustainability performance can be explained through the sustainability theory, which states that society will prioritize social responses to economic and environmental issues (Tjahjadi et al., 2021). Companies, in conducting their business, must be able to respond to these social priorities by balancing the needs of stakeholders in the present and future (Artiach et al., 2010; Meadows & Randers, 1972; Pemer, Börjeson, & Werr, 2020). The alignment of these various interests will then be considered in the process of forming corporate strategies related to sustainability disclosure (Jan et al., 2021). Applying effective governance can ultimately enhance the legitimacy of the company (Michelon & Parbonetti, 2010) and drive company performance. Theoretically, companies with good and effective governance will have a stronger stakeholder trust, leading to improved sustainability performance (Hussain et al., 2018). Sustainability performance is expected to be a long-term performance measure of a company's activities, preserving economic, social, and environmental well-being (Formentini & Taticchi, 2016; Hassini et al., 2012; Darsono et al., 2022). Sustainability performance is highly dependent on the quality of governance because effective governance implementation can maintain stakeholder trust (Hussain et al., 2018; Tjahjadi et al., 2021; Nguyen et al., 2023).

Krechovská (2014) states that applying good governance will positively impact sustainability performance, encompassing economic, social, and environmental well-being. Another positive impact of good corporate governance is the increased company value and corporate social responsibility (CSR) as one of the important instruments in developing sustainability performance (Jaimes-Valdez et al., 2016; Klettner et al., 2014; Matten & Moon, 2008; Sharma & Khanna, 2014). Jan et al. (2021) also mention another point that the existence of a Shariah board in Islamic banking illustrates better sustainability performance. This is explained by the diversity of the board contributing to better leadership, and diverse board oversight can enhance board independence (Jan et al., 2021). Based on these explanations, the research develops the following hypotheses.

***H_1**: Shariah governance has a positive effect on sustainability performance.*

***H_{1a}**: Shariah governance has a positive effect on economic sustainability performance.*

***H_{1b}**: Shariah governance has a positive effect on environmental sustainability performance.*

***H_{1c}**: Shariah governance has a positive effect on social sustainability performance.*

Sharia Board Size and Sustainability Performance

The number of members within the board defines the size of the Shariah board. A larger board composition provides opportunities for organizational management to take sustainability initiatives and bring diversity that allows the company to mitigate risks (Grassa, 2016). The presence of Shariah experts within the Shariah board composition is crucial for the board's performance quality in ensuring the company's business operations comply with Shariah principles (Jan et al., 2021). The size of the Shariah board must be efficient to operate effectively, if the board size is too small, it can lead to an increased workload for board members and reducing the board's performance quality (Hussain et al., 2018). The Shariah board should consist of at least three members with expertise and experience in the field (Kolsi & Grassa, 2017), but should not exceed seven members (Ben Zeineb & Mensi, 2018).

Research on the relationship between board size and environmental disclosure has been conducted by Said et al. (2009) who found a positive relationship between the two variables. Additionally, some studies found significant associations between board size and CSR reporting (Beji, Yousfi, Loukil, & Omri, 2021; Said et al., 2009). Board size was also found to positively impact ESG (economic, social, governance) disclosure in the research conducted by (Chams & García-Blandón, 2019). Based on several previous research findings, this study develops the following hypotheses.

***H_2**: Shariah board size has a positive effect on sustainability performance.*

***H_{2a}**: Shariah board size has a positive effect on economic sustainability performance.*

***H_{2b}**: Shariah board size has a positive effect on environmental sustainability performance.*

***H_{2c}**: Shariah board size has a positive effect on social sustainability performance.*

Sharia Board Meeting and Sustainability Performance

The main task of the Shariah board is to provide advice and counsel to the Board of Directors and oversee the organization's activities to ensure Shariah compliance. The fulfillment of these tasks includes holding meetings, which should be conducted at least once a month. During these meetings, the Shariah board discusses agenda items and subsequently formulates decisions or recommendations as the meeting outcome. According to Hussain et al. (2018), the Shariah board meetings can be seen as a substitute for operational tasks and represent a standard form of supervision conducted by the Shariah board.

The frequency of board meetings is considered to enhance the oversight of the company's operational activities and motivate improved transparency (Lipton & Lorsch, 1992). Meetings conducted by the board to discuss relevant issues are expected to assist the organization in strategic planning, including long-term plans to address sustainability challenges, which are one of the current issues in the organizational environment (Ricart, Rodríguez, & Sánchez, 2005). In this study, it is assumed that there is a positive relationship between Shariah board meetings and sustainability performance.

***H_3**: Shariah board meeting has a positive effect on sustainability performance.*

***H_{3a}**: Shariah board meeting has a positive effect on economic sustainability performance.*

***H_{3b}**: Shariah board meeting has a positive effect on environmental sustainability performance.*

***H_{3c}**: Shariah board meeting has a positive effect on social sustainability performance.*

Sharia Board Education and Sustainability Performance

Members of the Shariah board technically require sufficient knowledge and expertise in the field of Shariah economics. To enhance their performance quality in supervision and consultation, they also need knowledge of financial and accounting matters, and even general business management (Grassa, 2016; Hassan & Marimuthu, 2018). Indirectly, improving the performance of the Shariah board can lead to improved performance of the Islamic financial institution itself (Hakimi et al., 2018). Previous research, mainly conducted in conventional financial institutions, shows that the education level of the management board is an essential factor in corporate disclosure practices (Haniffa & Cooke, 2005) . The education level of the board in a company is also positively related to the company's performance (Hassan & Marimuthu, 2018). Based on several previous research findings, the hypothesis development for this study is as follows.

***H_4**: Shariah board education has a positive effect on sustainability performance.*

***H_{4a}**: Shariah board education has a positive effect on economic sustainability performance.*

***H_{4b}**: Shariah board education has a positive effect on environmental sustainability performance.*

***H_{4c}**: Shariah board education has a positive effect on social sustainability performance.*

Sharia Board Diversity and Sustainability Performance

Diversity is one of the aspects of sustainability and has become a globally recognized topic. Hafsi & Turgur (2013) state that demographic attributes of the management board, such as diversity in structure, age, background, or gender, can influence the company's strategy. In this research, gender diversity will be used as a proxy for diversity. Gender diversity in the board composition leads to richer perspectives as different genders respond to norms and have different attitudes, beliefs, and perspectives (Sundarasen et al., 2016). In terms of performance, studies in the banking sector have found that banking performance improves with board diversity (Duppati, Scrimgeour, & Sune, 2019). Luthar et al. (1997) add that female board members have different professional experiences and values, and thus tend to be more sensitive to CSR-related activities. Specifically, Hafsi & Turgur (2013) mention that gender diversity can drive organizational CSR activities.

Regarding sustainability performance, Nielsen & Huse (2010) state that women are more concerned about environmental issues and can influence decisions related to environmental policies. Diversity in board members is also found to have a positive relationship with a company's social performance (Beji et al., 2021). Based on several previous research findings, this study assumes that there is a positive relationship between Shariah board diversity and sustainability performance.

***H_5**: Shariah board diversity has a positive effect on sustainability performance.*

***H_{5a}**: Shariah board diversity has a positive effect on economic sustainability performance.*

***H_{5b}**: Shariah board diversity has a positive effect on environmental sustainability performance.*

***H_{5c}**: Shariah board diversity has a positive effect on social sustainability performance.*

Research Method

The secondary data was collected by hand from the reports of the Islamic Commercial Banks in Indonesia, which were obtained from the company's official website. The utilized reports include annual reports, governance reports, and sustainability reports for the period of 2010-2020.These three reports were chosen based on the research needs and data availability, resulting in a total of 136 observations from each bank which experienced an increase starting from 11 banks in 2010 to 14 banks in 2020. The sustainability performance measurement will follow the assessment conducted by Tjahjadi et al. (2021a) which adopts the Global Reporting Index (GRI) guidelines accessible through the official GRI website. Sustainability performance in this study will be divided into three dimensions: economic, environmental, and social.

The research will be conducted using multiple linear regression analysis. Based on previous research findings (Zahid et al., 2020; Said et al., 2009; Tjahjadi et al., 2021), this study develops four models that align with the three types of sustainability performance measurements. The four models were formulated as follows:

Model 1: Effect of SBG on economic sustainability performance

$$EcSP_{it} = \alpha + \beta SBG_{it} + \gamma Control_{it} + e \quad (1)$$

$$EcSP_{it} = \alpha + \beta_1 SBSize_{it} + \beta_2 SBMeet_{it} + \beta_3 SBEdu_{it} + \beta_4 SBDiv_{it} + \gamma Control_{it} + e \quad (2)$$

Model 2: Effect of SBG on environment sustainability performance

$$EnvSP_{it} = \alpha + \beta SBG_{it} + \gamma Control_{it} + e \quad (3)$$
$$EnvSP_{it} = \alpha + \beta_1 SBSize_{it} + \beta_2 SBMeet_{it} + \beta_3 SBEdu_{it} + \beta_4 SBDiv_{it} + \gamma Control_{it} + e \quad (4)$$

Model 3: Effect of SBG on social sustainability performance
$$SocSP_{it} = \alpha + \beta SBG_{it} + \gamma Control_{it} + e \quad (5)$$
$$SocSP_{it} = \alpha + \beta_1 SBSize_{it} + \beta_2 SBMeet_{it} + \beta_3 SBEdu_{it} + \beta_4 SBDiv_{it} + \gamma Control_{it} + e \quad (6)$$

Model 4: Effect of SBG on sustainability performance (aggregate)
$$SP_{it} = \alpha + \beta SBG_{it} + \gamma Control_{it} + e \quad (7)$$
$$SP_{it} = \alpha + \beta_1 SBSize_{it} + \beta_2 SBMeet_{it} + \beta_3 SBEdu_{it} + \beta_4 SBDiv_{it} + \gamma Control_{it} + e \quad (8)$$

The dependent variables are EcSP (Economic Sustainability Performance); EnvSP (Environment Sustainability Performance); SocSP (Social Sustainability Performance); and SP (Sustainability Performance-aggregate). The independent variables include SBG (Shariah Board Governance score); SBSize (Sharia board size); SBMeet (Sharia board meeting); SBEd (Sharia board education); SBDiv (Sharia board diversity); SBRep (Sharia board reputation). *α:* Constant and γControl: control variables.

Measurement of Variables

Shariah Board Governance (SBG) Score and individual attributes of Sharia board

Our variable of interest is the Shariah board governance. This variable proxied by SBG score is constructed using four individual attributes of the Sharia board (SB) as was done in Safiullah (2021). These are Shariah board size, its members' meeting attendance, academic qualifications, and gender diversity. The SBG score is then measured as an average score of: (i) a relative measure of the SB size [$(SB\ size_{it} – min_{it})/(max_{it} – min_{it})$]; (ii) the proportion of SB members attend in all SB meetings ($\Sigma\ attendance_{it}/\Sigma\ meeting_{it}$); (iii) the proportion of SB members with a doctorate degree (Σ *member with doctorate* $degree_{it}/\Sigma\ member_{it}$); and (iv) the percentage of the total number of female SB members ($\Sigma\ female\ member_{it}/\Sigma\ member_{it}$). The Shariah board governance score is expressed in percentage terms.

Islamic banking with a higher SBG score indicates a better SBG relative to others. The better the SBG, the better it will help Islamic banking establish more Shariah-compliant financial products and instruments, use input from resources more efficiently, and assist Islamic banking in taking more prudent risks (Safiullah, 2021). Furthermore, the role of SBG will be to deliver Islamic banking in achieving sustainable performance.

In addition to the SBG score, data on the individual attributes of the Sharia board (SB) are also used, namely size, meetings, educational background, and gender diversity. The size of the SB denoted as "SBSize" represents the total number of Shariah board members (*SBSize = Σ the number SB members*). The meetings of the SB denoted as "SBMeet" represent the total number of SB meetings held (*SBMeet = Σ the number of SB meetings*). The educational background of the Shariah Board, denoted as "SBEd" represents the educational level of Shariah Board members, calculated using a scoring system (*SBEd = Bachelor + 2 x Master + 3 x PhD*). The gender diversity of the Shariah board denoted as "SBDiv" is a dummy variable where 0 indicates the absence of female members and 1 indicates the presence of female members in the composition of the Shariah board.

Sustainability Performance (SP)

Sustainability performance (SP) is measured based on the number of sustainability indicators disclosed in the company's reports. The sustainability indicators used in this study adhere to the widely recognized Global Reporting Index (GRI) standards, following previous research conducted by Jan et al. (2021). Many international companies have extensively utilized the GRI standards as a benchmark in preparing sustainability reports (Hussain et al., 2018; Tjahjadi et al., 2021). The selection of the GRI standards is also based on the prevalent practice of sustainability reporting in Indonesia's current Shariah banking sector. A total of 27 indicator items, which are relevant aspects of Shariah banking in Indonesia, have been chosen for this study. These indicators comprise 4 aspects in the economic category, 4 aspects in the environmental category, and 19 aspects in the social category.

SP measurements were carried out using the weighted content analysis method, which involves a manual content analysis of company reports to obtain non-financial data. The measurement is done by assigning values of 0 to 2 for each disclosed indicator in the company reports. A value of 0 is given to indicators that are not disclosed, a value of 1 for indicators that are disclosed partially or not in detail, and a value of 2 for indicators that are disclosed materially. The measurement of sustainability performance is then calculated using the formula adopted from the research by Tjahjadi et al. (2021) and Zahid et al. (2020), which is $\sum = dj/N$. Here, dj represents the number of indicators disclosed in the report and N is the total number of indicators for each category.

Results and Discussion

Descriptive Statistic

Table 1 shows the descriptive statistics of the study. For the dependent variable, the sustainability performance aggregate has a mean value of 0.91 compared to the potential highest (2.00). On a "poor to good" measurement scale, the sustainability performance of Islamic banks in Indonesia can be considered as "fair". Among the three dimensions of sustainability performance, the economic dimension has the highest mean value at 1.26, followed by the social dimension at 1.03, and lastly the environmental dimension has a mean value of 0.46. On average, Islamic banks in Indonesia obtained an SBG score of 63.20% during the research period.

Table 1 Descriptive Statistics

	Ec_SP	Env_SP	Soc_SP	Agr_SP	SBG score	SB_Size	SB_Meet	SB_Edu	SB_Div
Mean	1,26	0,46	1,03	0,91	0,63	0,76	0,88	0,81	0,08
Minimum	0,50	0,00	0,00	0,16	0,52	0,67	0,67	1,00	1,00
Maximum	2,00	2,00	2,00	2,00	0,87	1,00	1,00	0,59	0,00
St. Dev	0,48	0,67	0,58	0,53	0,085	0,128	0,092	0,155	0,266
N	136	136	136	136	136	136	136	136	136

Hypothesis Testing

Table 2 shows the testing results for the four research models regarding the effect of Shariah governance on sustainability performance. The research findings indicate that Shariah governance (SBG score) positively and significantly impact sustainability performance, including the economic, environmental, social, and aggregate aspects. As for the individual Shariah board attributes, only the Shariah board meetings have been proven to impact sustainability performance positively and significantly across the economic, environmental, and social dimensions. However, the aspects of Shariah board size and educational background have not shown any significant influence on sustainability performance. On the other hand, the Shariah board's diversity significantly impacts sustainability performance but in a negative way.

Table 2 Results of the four models

Variable	Exp. Sign	Economic SP		Environmental SP		Social SP		Aggregate SP	
		Coef	P>|t|	Coef	P>|t|	Coef	P>|t|	Coef	P>|t|
SBG score	+	0,229	0,005***	0,161	0,060*	0,294	0,000***	0,248	0,003**
Constanta		0,335	0,000***	0,064	0,514	0,137	0,089*	0,175	0,020**
Adj R-Square		0,145		0,027		0,151		0,103	
Individual Attributes									
SBSize	+	0,094	0,504	-0,068	0,656	0,003	0,983	0,005	0,974
SBMeet	+	0,205	0,012**	0,182	0,039**	0,258	0,002***	0,236	0,006**
SBEdu	+	-0,046	0,721	-0,010	0,945	0,077	0,545	0,009	0,944
SBDiv	+	-0,151	0,066*	-0,028	0,750	-0,178	0,030**	-0,120	0,158
Constanta		0,333	0,001***	0,168	0,239	0,137	0,233	0,207	0,055*
Adj R-Square		0,176		0,036		0,185		0,119	

*p-value<0,1; **p-value<0,05; ***p-value<0,01

Discussions

The following is a summary of the research findings that will be discussed in the next sub-sections.

Table 3 Summary of the hypothesis testing

Hypothesis	Expected sign	Resulted sign	Statistically significance	Decision
H1: SBG – SP	+	+	S**	Supported
H1a: SBG – EcSP	+	+	S***	Supported
H1b: SBG – EnvSP	+	+	S*	Supported
H1c: SBG – SocSP	+	+	S***	Supported
H2: SB Size – SP	+	+	NS	Not Supported
H2a: SB Size – EcSP	+	+	NS	Not Supported
H2b: SB Size – EnvSP	+	-	NS	Not Supported
H2c: SB Size – SocSP	+	+	NS	Not Supported
H3: SB Meet – SP	+	+	S***	Supported
H3a: SB Meet – EcSP	+	+	S**	Supported
H3b: SB Meet – EnvSP	+	+	S**	Supported
H3c: SB Meet – SocSP	+	+	S***	Supported
H4: SB Edu – SP	+	+	NS	Not Supported
H4a: SB Edu – EcSP	+	-	NS	Not Supported
H4b: SB Edu – EnvSP	+	-	NS	Not Supported
H4c: SB Edu – SocSP	+	+	NS	Not Supported
H5: SB Div – SP	+	-	NS	Not Supported
H5a: SB Div – EcSP	+	-	S*	Not Supported
H5b: SB Div – EnvSP	+	-	NS	Not Supported
H5c: SB Div – SocSP	+	-	S**	Not Supported

Notes: SBG = Sharia Board Governance as a proxy of sharia governance; SP = sustainability performance (aggregate); EcSP = economic sustainability performance; EnvSP = environmental sustainability performance; SocSP = social sustainability performance; SB Size = sharia board size; SB Meet = sharia board meeting; SB Edu = sharia board education; and SB Div = sharia board diversity.

The Effect of Sharia Governance on Sustainability Performance

The research results in Table 3 above indicate that Shariah governance, measured by the SBG score, has a positive and significant impact on economic, environmental, and social sustainability performance. These findings align with the studies conducted by Farag et al. (2018) and Safiullah (2021), which found that Shariah governance plays a role in the long-term sustainability of companies. Similarly, the Shariah Board also plays an important role in disclosing social responsibilities (El-Halaby & Hussainey, 2016; Ibrahim et al., 2015). Mukhibad, Jayanto, Suryarini, & Hapsoro (2022) add that the presence of the Shariah Board and the Board of Directors in the management hierarchy is crucial in enhancing Shariah compliance disclosure and social performance disclosure. The function of the Shariah Board is to ensure Shariah compliance, which indirectly encourages the organization to behave justly and promote ethical norms to all parties involved in the business (Hafez, 2015).

Mukhibad, Jayanto, Suryarini, & Hapsoro (2022) state that strong and effective corporate governance supports the achievement of performance and the contribution of Islamic financial institutions to economic activities. In Indonesia, awareness of the importance of implementing governance in Islamic banking has relatively developed in line with the growth of the Islamic financial services industry itself. In terms of regulation, governance practices in Islamic banking are separately regulated in Bank Indonesia Regulation No.

11/33/PBI/2009 on the Implementation of Good Corporate Governance for Sharia Commercial Banks and Sharia Business Units. This regulation outlines the framework of Shariah governance that Shariah banks need to follow, including the existence of the Shariah Board (Dewan Perwakilan Syariah/DPS). In addition to the DPS's role at the organizational level, Indonesia also has a national Shariah board, known as the Dewan Syariah Nasional, under the Indonesian Council of Ulama (MUI) or commonly referred to as DSN-MUI. The governance practice with dual bodies or institutions for Shariah compliance fulfillment, as seen in Indonesia or Malaysia, is mentioned by Grassa (2013) as the most efficient and effective model for achieving Shariah compliance.

The Effect of Sharia Board Size on Sustainability Performance

The research findings in this study show that the Shariah board size does not significantly impact sustainability performance, whether in the economic, environmental, or social dimensions. Compared to similar research results, these findings align with the study by Giannarakis (2014) which also found a non-significant relationship between board size and CSR reporting. In Indonesia, this result is consistent with the research conducted by Tjahjadi et al. (2021) which also did not find a significant relationship between board size and sustainability performance, particularly in the environmental dimension.

These research findings need further exploration, especially concerning determining the optimal number of Shariah board members. Most of the Shariah boards in Indonesian Islamic banks consist of two members, with a maximum of three members in some Islamic banks. This number is less than ideal, according to Kolsi & Grassa (2017), who state that the composition of the Shariah board should not have fewer than three members. A sufficient number of Sharia board members will enhance the quality of board performance, as having more expertise and experience among the members will assist the board in effectively fulfilling its tasks and responsibilities. A larger board size increases the potential for more efficient decision-making, resulting in better board performance (Husted & Sousa-Filho, 2019; Saidat et al., 2019). Farag et al. (2018) add that a larger Shariah board size corresponds to better financial performance of the company.

On another note, many Shariah board members in Indonesia hold cross-membership as board members in several Islamic financial institutions. Izzatika & Lubis (2019) state that the practice of cross-membership by Shariah boards in Indonesia is due to the limited human resources available to meet industry needs. In Indonesia, cross-membership in the Shariah board is generally allowed but requires disclosure of such multiple positions as a form of transparency. However, this practice may lead to less effective board performance and potential conflicts of interest. Usamah (2010) states that restricting the practice of cross-membership in the Shariah board can improve board performance by encouraging focus and professionalism among board members.

The Effect of Sharia Board Meeting on Sustainability Performance

During the meetings, the Shariah board fulfills its duties by providing advice and oversight to ensure that the operations of the Islamic bank comply with Shariah principles.

Additionally, the Shariah board meeting serves as a platform for board members to make decisions related to the company's business processes or other strategic issues. The research findings in this study demonstrate that Shariah board meetings have a positive and significant impact on sustainability performance, including in the economic, environmental, and social dimensions. These results align with the research conducted by Allegrini & Greco (2013), which found a significant positive relationship between board meetings and voluntary corporate disclosures.

Brick & Chidambaran (2010) explain that a cooperative relationship between the board and management enhances coordination and collaboration, leading to more efficient utilization of the company's resources. Having coordination meetings between the Shariah board and management also allows the Shariah board to address strategic issues within the company beyond Shariah compliance concerning the company's products and business operations.

The Effect of Sharia Board Education on Sustainability Performance

The Shariah board education, which measures the competence of Shariah board members and is proxied through their level of education, was found to have no significant relationship with sustainability performance, including in the economic, environmental, and social dimensions. Comparing the results with general company performance research, this study aligns with Tjahjadi et al. (2021), who also did not find a significant relationship between board education and sustainability performance, particularly in the social dimension. In more general studies, Bear, Rahman, & Post (2010) and Giannarakis (2014) found no significant impact of board education background on company performance and CSR disclosure.

Shariah board members who possess competencies related to knowledge and experience in muamalah (Islamic jurisprudence) and finance in general are considered to drive more effective company performance (Grassa et al., 2018; Grassa & Matoussi, 2014). The combination of these competencies provides a more diverse experience, enabling the Shariah board to address social and environmental issues while still maximizing economic performance (Jan et al., 2021). However, in this study, most of the Shariah board members in Indonesia have a background in muamalah rather than finance or general business education.

The Effect of Sharia Board Diversity on Sustainability Performance

The presence of female Shariah board members serves as a proxy for diversity in this study. Based on the results, it is evident that diversity in the Shariah board significantly negatively impact sustainability performance in the economic and social dimensions. These findings indicate that the presence of female Shariah board members in Islamic banks in Indonesia may not yet drive sustainability performance. This aligns with research suggesting that gender diversity has a negative impact on company performance (Badola & Verma, 2007; Endraswati, 2018; Shrader, Blackburn, & Iles, 1997). Metcalfe (2006) argues that women still face career barriers due to the strong gender roles prevalent in Islamic culture and business.

Another study by Kanter (1977) adds that the impact of minority groups (in this case, female board members) will only be effective when a certain representation threshold is achieved, such as having at least three female board members. In Islamic banks in Indonesia, most Shariah board members are still male. Endraswati (2018) conducted specific research that found negative relationship between gender diversity in the management composition of Indonesian Islamic banks and company performance. It was explained in her study that this is due to the influence of Indonesian culture and the persistence of gender stereotypes, particularly in the Asian region, where women are still perceived to have less capacity and characteristics for top management roles compared to men. Another perspective by Lückerath-Rovers & de Bos (2011) suggests that the presence of female board members only has symbolic value and does not directly relate to improved company performance.

Conclusion

Deriving the observation data from Islamic banks in Indonesia for the 2010-2020 period, the study concludes the following. First, Shariah governance, measured by the SBG score, has a positive and significant impact on sustainability performance in the economic, environmental, and social dimensions. Second, among the individual attributes of the Shariah board, only Shariah board meetings have a positive and significant impact on sustainability performance in the economic, environmental, and social dimensions. The findings indicate that the Shariah board plays a crucial role in achieving company performance, including sustainability performance. However, there are still several issues and challenges in the development of the Shariah board's role within the framework of Shariah governance. Some of these issues and challenges include determining the optimal number or size of Sharia board members, standardizing, or certifying the Shariah board, enhancing the competencies of Sharia board members to include not only expertise in muamalah but also in business management, and empowering the role of female DPS members.

From the practical perspective, this study holds implications for policy and practice by providing useful information for various decision-makers. Specifically, it suggests a new rationale for the necessity of improved Shariah board governance, as we find evidence supporting the idea that stronger Shariah board governance positively impacts sustainability performance. By recognizing the significant role of the Shariah board for Islamic banks, the management is expected to optimize this role. The company's management needs to ensure the involvement of Sharia board members in strategic decision-making, particularly in sustainability, which is an aspect increasingly considered by stakeholders. Active involvement of Sharia board members is anticipated to promote the internalization of Shariah values in all aspects of the company's business, thus fostering fairness for all stakeholders. Achieving fairness for all stakeholders is a goal of governance implementation and a fundamental aspect of sustainability issues.

Furthermore, several issues and challenges in developing Shariah governance should be considered by the company's management and the regulators to enhance the quality of governance.

From the theoretical perspective, this study provides empirical evidence that contributes to further developing the Sharia governance framework and sustainability performance in Indonesia. Additionally, this study is expected to raise awareness among the public and stakeholders regarding sustainability issues and the Shariah board's crucial role within the Shariah governance framework. Sustainability issues have become increasingly significant for the financial industry, particularly for Islamic banking, as sustainability aspects align with Islamic values and Shariah principles. Ultimately, it is hoped that Islamic banking institutions will become more conscious of incorporating sustainability practices into their business processes, aligning them with Shariah's values and principles, thereby contributing to a more sustainable and responsible financial industry.

Author Contributions

Conceptualization, Methodology, and Analysis, N.D.P. and R.A.K.; Original draft preparation and Visualization, N.D.P.; Review and Supervision, R.A.K.

Acknowledgment

The research topic was given administrative support by the Faculty of Economics and Business, University of Indonesia.

Conflicts of Interest

The corresponding authors declare no conflicts of interest. The funder had no role in the design, in the data collection, analysis, or interpretation; in writing the manuscript, or in decision to publish the results.

References

Abdel-Baki, M., & Leone Sciabolazza, V. (2014). A consensus-based corporate governance paradigm for Islamic banks. *Qualitative Research in Financial Markets, 6*, 93-108. https://doi.org/10.1108/QRFM-01-2013-0002

Abdelsalam, O., Dimitropoulos, P., Elnahass, M., & Leventis, S. (2016). Earnings management behaviors under different monitoring mechanisms: The case of Islamic and conventional banks. *Journal of Economic Behavior and Organization, 132*, 155-173. https://doi.org/10.1016/j.jebo.2016.04.022

Ajili, H., & Bouri, A. (2018). Corporate governance quality of Islamic banks: measurement and effect on financial performance. *International Journal of Islamic and Middle Eastern Finance and Management, 11*, 470-487. https://doi.org/10.1108/IMEFM-05-2017-0131

Alam, Md. K., Islam, F. T., & Runy, M. K. (2021). Why does Shariah governance framework important for Islamic banks? *Asian Journal of Economics and Banking, 5*, 158-172. https://doi.org/10.1108/AJEB-02-2021-0018

Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian Listed Companies. *Journal of Management and Governance, 17,* 187-216. https://doi.org/10.1007/s10997-011-9168-3
Almutairi, A. R., & Quttainah, M. A. (2017). Corporate governance: Evidence from Islamic banks. *Social Responsibility Journal, 13*, 601-624. https://doi.org/10.1108/SRJ-05-2016-0061
Aras, G., & Crowther, D. (2008). Governance and sustainability: An investigation into the relationship between corporate governance and corporate sustainability. *Management Decision, 46*, 433-448. https://doi.org/10.1108/00251740810863870
Artiach, T., Lee, D., Nelson, D., & Walker, J. (2010). The determinants of corporate sustainability performance. *Accounting & Finance, 50*(1), 31–51. https://doi.org/10.1111/j.1467-629x.2009.00315.x
Badola, B. S., & Verma, R. (2006). Determinants of Profitability of Banks in India: A Multivariate Analysis. *Delhi Business Review, 7*, 79-88.
Barin Cruz, L., Ávila Pedrozo, E., & de Fátima Barros Estivalete, V. (2006). Towards sustainable development strategies. *Management Decision, 44*(7), 871–891. https://doi.org/10.1108/00251740610680578
Bear, S., Rahman, N., & Post, C. (2010). The Impact of Board Diversity and Gender Composition on Corporate Social Responsibility and Firm Reputation. *Journal of Business Ethics, 97*(2), 207–221. https://doi.org/10.1007/s10551-010-0505-2
Beji, R., Yousfi, O., Loukil, N., & Omri, A. (2020). Board Diversity and Corporate Social Responsibility: Empirical Evidence from France. *Journal of Business Ethics, 173*(1), 133–155. https://doi.org/10.1007/s10551-020-04522-4
Ben Zeineb, G., & Mensi, S. (2018). Corporate governance, risk and efficiency: evidence from GCC Islamic banks. *Managerial Finance, 44*(5), 551–569. https://doi.org/10.1108/mf-05-2017-0186
Brick, I. E., & Chidambaran, N. K. (2010). Board meetings, committee structure, and firm value. *Journal of Corporate Finance, 16*(4), 533–553. https://doi.org/10.1016/j.jcorpfin.2010.06.003
Chabowski, B. R., Mena, J. A., & Gonzalez-Padron, T. L. (2010). The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities. *Journal of the Academy of Marketing Science, 39*(1), 55–70. https://doi.org/10.1007/s11747-010-0212-7
Chams, N., & García-Blandón, J. (2019). Sustainable or not sustainable? The role of the board of directors. Journal of Cleaner Production, 226, 1067-1081. https://doi.org/10.1016/j.jclepro.2019.04.118
Choudhury, M. A., & Alam, M. N. (2013). Corporate governance in Islamic perspective. *International Journal of Islamic and Middle Eastern Finance and Management, 6*, 180-199. https://doi.org/10.1108/IMEFM-10-2012-0101
Darsono, S. N. A. C., Wong, W.-K., Thai, T., Nguyen, H., Fajar Jati, H., & Dewanti, D. S. (2022). Good Governance and Sustainable Investment: The Effects of Governance Indicators on Stock Market Returns. *Advances in Decision Sciences*, *26*(1). https://doi.org/https://doi.org/10.47654/v26y2022i1p69-101
Duppati, G. R., Scrimgeour, F., & Sune, A. (2019). Relevance of corporate boards in driving performance in the period that covers financial crisis. *Corporate Governance: The International Journal of Business in Society, 19*(2), 321–338. https://doi.org/10.1108/cg-11-2016-0204
El-Halaby, S., & Hussainey, K. (2016). Determinants of compliance with AAOIFI standards by Islamic banks. *International Journal of Islamic and Middle Eastern Finance and Management, 9*(1), 143–168. https://doi.org/10.1108/imefm-06-2015-0074

Endraswati, H. (2018). Gender diversity in board of directors and firm performance: A study in Indonesia sharia banks. *Review of Integrative Business and Economics Research, 7*, 299-311.

Farag, H., Mallin, C., & Ow-Yong, K. (2018). Corporate governance in Islamic banks: New insights for dual board structure and agency relationships. *Journal of International Financial Markets, Institutions and Money, 54*, 59–77. https://doi.org/10.1016/j.intfin.2017.08.002

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

Ghayad, R. (2008). Corporate governance and the global performance of Islamic banks. *Humanomics, 24*, 207-216. https://doi.org/10.1108/08288660810899368

Giannarakis, G. (2014). Corporate governance and financial characteristic effects on the extent of corporate social responsibility disclosure. *Social Responsibility Journal, 10*, 569-590. https://doi.org/10.1108/SRJ-02-2013-0008

Goyal, P., Rahman, Z., & Kazmi, A. A. (2013). Corporate sustainability performance and firm performance research: Literature review and future research agenda. *Management Decision, 51*, 361-379. https://doi.org/10.1108/00251741311301867

Grassa, R. (2013). Shariʿah Governance System in Islamic Financial Institutions: New Issues and Challenges. *Arab Law Quarterly, 27*(2), 171–187. https://doi.org/10.1163/15730255-12341254

Grassa, R. (2016). Corporate governance and credit rating in Islamic banks: Does Shariah governance matters? *Journal of Management and Governance, 20*, 875-906. https://doi.org/10.1007/s10997-015-9322-4

Grassa, R., & Matoussi, H. (2014). Corporate governance of Islamic banks: A comparative study between GCC and Southeast Asia countries. *International Journal of Islamic and Middle Eastern Finance and Management, 7*, 346-362. https://doi.org/10.1108/IMEFM-01-2013-0001

Grassa, R., Chakroun, R., & Hussainey, K. (2018). Corporate governance and Islamic banks' products and services disclosure. *Accounting Research Journal, 31*, 75-89. https://doi.org/10.1108/ARJ-09-2016-0109

Hafez, H. M. (2015). Corporate governance and financial performance: an empirical study on Egyptian banks. *Corporate Ownership and Control, 13*, 1359-1374. https://doi.org/10.22495/cocv13i1c11p8

Hafsi, T., & Turgut, G. (2012). Boardroom Diversity and its Effect on Social Performance: Conceptualization and Empirical Evidence. *Journal of Business Ethics, 112*(3), 463–479. https://doi.org/10.1007/s10551-012-1272-z

Hakimi, A., Rachdi, H., Ben Selma Mokni, R., & Hssini, H. (2018). Do board characteristics affect bank performance? Evidence from the Bahrain Islamic banks. *Journal of Islamic Accounting and Business Research, 9*, 251-272. https://doi.org/10.1108/JIABR-06-2015-0029

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy, 24*, 391-430. https://doi.org/10.1016/j.jaccpubpol.2005.06.001

Hassan, R., & Marimuthu, M. (2018). Contextualizing comprehensive board diversity and firm financial performance: Integrating market, management and shareholder's perspective. *Journal of Management and Organization, 24*, 634-678. https://doi.org/10.1017/jmo.2018.10

Hassini, E., Surti, C., & Searcy, C. (2012). A literature review and a case study of sustainable supply chains with a focus on metrics. *International Journal of Production Economics, 140*, 69-82. https://doi.org/10.1016/j.ijpe.2012.01.042

Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate Governance and Sustainability Performance: Analysis of Triple Bottom Line Performance. *Journal of Business Ethics, 149*, 411-432. https://doi.org/10.1007/s10551-016-3099-5

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

Ibrahim, M. S., Darus, F., Yusoff, H., & Muhamad, R. (2015). Analysis of Earnings Management Practices and Sustainability Reporting for Corporations that Offer Islamic Products & Services. *Procedia Economics and Finance, 28*, 176–182. https://doi.org/10.1016/s2212-5671(15)01098-9

Izzatika, N. F., & Lubis, A. T. (2019). Isu dan tantangan kompetensi Dewan Pengawas Syariah di Indonesia. *Jurnal Akuntansi Dan Keuangan Islam, 4*, 147-167. https://doi.org/10.35836/jakis.v4i2.24

Jaimes-Valdez, M. A., & Jacobo-Hernandez, C. A. (2016). Sustainability and Corporate Governance: Theoretical Development and Perspectives. *Journal of Management and Sustainability, 6*(3), 44. https://doi.org/10.5539/jms.v6n3p44

Jan, A. A., Lai, F.-W., & Tahir, M. (2021). Developing an Islamic Corporate Governance framework to examine sustainability performance in Islamic Banks and Financial Institutions. *Journal of Cleaner Production, 315*, 128099. https://doi.org/10.1016/j.jclepro.2021.128099

Kanter, R. M. (1977). Some effects of proportions on group life: Skewed sex ratios and responses to token women. *American Journal of Sociology, 82*, 965-990. https://doi.org/10.1086/226425

Klettner, A., Clarke, T., & Boersma, M. (2013). The Governance of Corporate Sustainability: Empirical Insights into the Development, Leadership and Implementation of Responsible Business Strategy. *Journal of Business Ethics, 122*(1), 145–165. https://doi.org/10.1007/s10551-013-1750-y

Kolsi, M. C., & Grassa, R. (2017). Did corporate governance mechanisms affect earnings management? Further evidence from GCC Islamic banks. *International Journal of Islamic and Middle Eastern Finance and Management, 10*, 2-23. https://doi.org/10.1108/IMEFM-07-2015-0076

Krechovská, M. (2014). Impact of Sustainable Development on the Financial Management of Czech Enterprises. *Precedia Engineering, 69*, 1144-1151. https://doi.org/10.1016/j.proeng.2014.03.103

Labuschagne, C., & Brent, A. C. (2006). Social indicators for sustainable project and technology life cycle management in the process industry. *International Journal of Life Cycle Assessment, 11*, 3-15. https://doi.org/10.1065/lca2006.01.233

Lipton, M., & Lorsch, J. W. (1992). A Modest Proposal for Improved Corporate Governance. *The Business Lawyer, 48*(1), 59–77. http://www.jstor.org/stable/40687360

Lückerath-Rovers, M., & de Bos, A. (2011). Code of conduct for non-executive and supervisory directors. *Journal of Business Ethics, 100*, 465-481. https://doi.org/10.1007/s10551-010-0691-y

Luthar, H. K., DiBattista, R. A., & Gautschi, T. (1997). Perception of what the ethical climate is and what it should be: The role of gender, academic status, and ethical education. *Journal of Business Ethics, 16*(2), 205–217. https://doi.org/10.1023/a:1017980520924

Matten, D., & Moon, J. (2008). "Implicit" and "explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. Academy of Management Review, 33, 404-424. https://doi.org/10.5465/amr.2008.31193458

Meadows, D. L., & Randers, J. (1972). Adding the Time Dimension to Environmental Policy. *International Organization, 26*(2), 213–233. https://doi.org/10.1017/s0020818300003301

Metcalfe, B. D. (2005). Exploring cultural dimensions of gender and management in the Middle East. Thunderbird International Business Review, 48(1), 93–107. https://doi.org/10.1002/tie.20087

Mezzi, N. (2018). Efficiency of Islamic banks and role of governance: empirical evidence. *Managerial Finance, 44*, 590-603. https://doi.org/10.1108/MF-05-2017-0171

Michelon, G., & Parbonetti, A. (2010). The effect of corporate governance on sustainability disclosure. *Journal of Management & Governance, 16*(3), 477–509. https://doi.org/10.1007/s10997-010-9160-3

Mollah, S., & Zaman, M. (2015). Shari'ah supervision, corporate governance and performance: Conventional vs. Islamic banks. *Journal of Banking and Finance, 58*, 418-435. https://doi.org/10.1016/j.jbankfin.2015.04.030

Morioka, S. N., & de Carvalho, M. M. (2016). A systematic literature review towards a conceptual framework for integrating sustainability performance into business. *Journal of Cleaner Production, 136*, 134-146. https://doi.org/10.1016/j.jclepro.2016.01.104

Mukhibad, H., Yudo Jayanto, P., Suryarini, T., & Bagas Hapsoro, B. (2022). Corporate governance and Islamic bank accountability based on disclosure—a study on Islamic banks in Indonesia. *Cogent Business & Management, 9*(1). https://doi.org/10.1080/23311975.2022.2080151

Nawaz, T., & Haniffa, R. (2017). Determinants of financial performance of Islamic banks: an intellectual capital perspective. *Journal of Islamic Accounting and Business Research, 8*, 130-142. https://doi.org/10.1108/JIABR-06-2016-0071

Nguyen, T. T. H., Darsono, S. N. A. C., Phan, G. Q., Pham, T. H. Van, Bach Thi, H., & Johari, S. M. (2023). The Nexus between Corporate Performance and State Ownership in Vietnam: Evidence of State Ownership's Inverted U-Shape and Provincial Business Environment Influences. *Journal of Risk and Financial Management*, *16*(12). https://doi.org/10.3390/jrfm16120499

Nielsen, S., & Huse, M. (2010). The Contribution of Women on Boards of Directors: Going beyond the Surface. *Corporate Governance: An International Review, 18*(2), 136–148. https://doi.org/10.1111/j.1467-8683.2010.00784.x

Nomran, N. M., & Haron, R. (2019). Dual board governance structure and multi-bank performance: a comparative analysis between Islamic banks in Southeast Asia and GCC countries. *Corporate Governance (Bingley), 19*, 1377-1402. https://doi.org/10.1108/CG-10-2018-0329

Nomran, N. M., & Haron, R. (2020). A systematic literature review on Sharīʿah governance mechanism and firm performance in Islamic banking. *Islamic Economic Studies, 27*, 91-123. https://doi.org/10.1108/IES-06-2019-0013

Nomran, N. M., Haron, R., & Hassan, R. (2018). Shari'ah supervisory board characteristics effects on Islamic banks' performance: Evidence from Malaysia. *International Journal of Bank Marketing, 36*, 290-304. https://doi.org/10.1108/IJBM-12-2016-0197

Pemer, F., Börjeson, L., & Werr, A. (2019). The role of chief executive tenure for public organizations' hiring of management consultants. *Governance, 33*(2), 269–285. https://doi.org/10.1111/gove.12422

Quttainah, M. A., & Almutairi, A. R. (2016). Corporate ethics: evidence from Islamic banks. *Journal of Management & Governance, 21*(4), 815–840. https://doi.org/10.1007/s10997-016-9360-6

Rahim, S. R. M., Mahat, F., Nassir, A. M., & Yahya, M. H. D. H. (2015). Re-thinking: Risk governance? *Procedia Economics and Finance, 31*, 689-698. https://doi.org/10.1016/S2212-5671(15)01157-0

Ricart, J. E., Rodríguez, M. Á., & Sánchez, P. (2005). Sustainability in the boardroom: An empirical examination of Dow Jones Sustainability World Index leaders. *Corporate Governance, 5,* 24-41. https://doi.org/10.1108/14720700510604670

Safiullah, M. (2021). Stability efficiency in Islamic banks: Does board governance matter? *Journal of Behavioral and Experimental Finance, 29*, 100442. https://doi.org/10.1016/j.jbef.2020.100442

Safiullah, M., & Shamsuddin, A. (2018). Risk in Islamic banking and corporate governance. *Pacific Basin Finance Journal, 47*, 129-149. https://doi.org/10.1016/j.pacfin.2017.12.008

Said, R., Zainuddin, Y., & Haron, H. (2009). The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. *Social Responsibility Journal, 5*, 212-226. https://doi.org/10.1108/17471110910964496

Saidat, Z., Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance: Evidence from Jordanian family and nonfamily firms. *Journal of Family Business Management, 9*, 54-78. https://doi.org/10.1108/JFBM-11-2017-0036

Shad, M. K., Lai, F.-W., Shamim, A., & McShane, M. (2020). The efficacy of sustainability reporting towards cost of debt and equity reduction. Environmental Science and Pollution Research, 27(18), 22511–22522. https://doi.org/10.1007/s11356-020-08398-9

Sharma, J. P., & Khanna, S. (2014). Corporate Social Responsibility, Corporate Governance and Sustainability: Synergies and Inter-relationships. *Indian Journal of Corporate Governance, 7*(1), 14–38. https://doi.org/10.1177/0974686220140102

Shibani, O., & De Fuentes, C. (2017). Differences and similaritites between corporate governance principles in Islamic banks and Conventional banks. Research in International Business and Finance, 42, 1005-1010. https://doi.org/10.1016/j.ribaf.2017.07.036

Shrader, C. B., Blackburn, V. B., & Iles, P. (2020). Women In Management And Firm Financial Performance: An Exploratory Study. *Journal of Managerial Issues, 32*(1), 102. https://www.proquest.com/scholarly-journals/women-management-firm-financial-performance/docview/2556442114/se-2

Sundarasen, S. D. D., Je-Yen, T., & Rajangam, N. (2016). Board composition and corporate social responsibility in an emerging market. *Corporate Governance: The International Journal of Business in Society, 16*(1), 35–53. https://doi.org/10.1108/cg-05-2015-0059

Tjahjadi, B., Soewarno, N., & Mustikaningtiyas, F. (2021). Good corporate governance and corporate sustainability performance in Indonesia: A triple bottom line approach. *Heliyon, 7*(3), e06453. https://doi.org/10.1016/j.heliyon.2021.e06453

Tseng, M. L., Tan, P. A., Jeng, S. Y., Lin, C. W. R., SYNegash, Y. T., & Darsono, S. N. A. C. (2019). Sustainable investment: Interrelated among corporate governance, economic performance and market risks using investor preference approach. *Sustainability (Switzerland), 11*(7). https://doi.org/10.3390/su11072108

Usamah. (2010). Peran kompetensi dan model pengorganisasian Dewan Pengawas Syariah terhadap pembiayaan berbasis bagi hasil pada perbankan syariah di Indonesia. *Neraca, 6*(2). https://jurnal.umpp.ac.id/index.php/neraca/article/view/424

Zahid, M., Rahman, H. U., Ali, W., Khan, M., Alharthi, M., Imran Qureshi, M., & Jan, A. (2020). Boardroom gender diversity: Implications for corporate sustainability disclosures in Malaysia. *Journal of Cleaner Production, 244*, 118683. https://doi.org/10.1016/j.jclepro.2019.118683