

The Effect of Sharia Stock Index Inclusion on ESG Disclosure: An Analysis of the Moderating Role of Company Size

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Abstract

This study aimed to analyse the influence of the status of companies listed on a sharia stock index on their level of environmental, social, and governance (ESG) disclosure and analyse how the influence of company size on this effect. Theoretically, sharia-indexed companies are expected to have a better level of ESG disclosure. Using a sample of 365 observations of companies listed on the Jakarta Islamic Index (JII) in the period 2016–2023, the results showing that sharia-indexed companies disclose significantly more information related to economic, social, and governance aspects than companies that are not sharia-indexed. In addition, test results show that companies listed on the Islamic stock index tend to be consistent in social disclosure, regardless of their size. The findings also suggest that the Islamic stock index inclusion will have a weaker role in ESG disclosure as company size increases. This study contributes evidence that companies listed on an Islamic stock index make use of social disclosure as a tool to strengthen their reputation. It also has implications for regulators and capital market authorities, encouraging more balanced disclosure across all ESG dimensions, particularly the social and governance aspects, as larger company size poses higher challenges.

Keywords: *Islamic Stock Index, ESG Disclosure, Company Size, Strong Institutions, Jakarta Islamic Index.*

Introduction

In recent years, interest in socially responsible investments has increased among global investors as they come to recognize the economic, social, and governance (ESG) benefits of socially responsible investments for their portfolios and investment performance (Avramov et al., 2022; Jin et al., 2024; Kaiser, 2020). ESG principles have become a key benchmark for investors in assessing corporate ethics, sustainability, and governance (Khattak & Abukhait., 2024). This growing attention to socially responsible investments stems from the increasingly uncertain global circumstances due to climate change, which has led to the establishment of the 2030 Sustainability Development Goals (SDGs) to address poverty, inequality, and climate change. Companies now are compelled to adapt to the emerging SDGs and changing global investor demand by publishing sustainability reports, both voluntarily and involuntarily, to keep their businesses run smoothly, which has caused an ongoing concern. In response to this, many researchers have conducted research using industry samples that are considered contributing to ESG disclosure practices (Capotă et al., 2022; Khorilov & Kim, 2024; Shakil, 2022; Siwei & Chalermkiat, 2023; Zhu et al., 2023). These studies, examining ESG disclosure and drawing association with firm value, risk, tax, cash flow, and stock price volatility, have found mixed results, noting positive, negative, and insignificant effects.

This study focuses on the effect of the status of companies listed on a sharia stock index on their environmental, social, and governance (ESG) disclosure (Ahmad et al., 2025). Research has shown that a company can be impacted by its listed status on a stock index as it can signal on the company's quality (Podolny, 1993), particularly in terms of ESG disclosure. The company's indexed status reflects its reputation (Olegario & McKenna, 2013). Other studies have also drawn attention to

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company size's important role in determining the extent to which companies disclose their ESG information (Bissoondoyal-Bheenick et al., 2023; Dremptetic et al., 2020; Shakil, 2022; Kulali, 2022; Lerner & Fryxell, 1988). Company size tends to encourage ESG disclosure, with significantly more attention from stakeholders to larger companies encouraging these companies to disclose ESG aspects in order to maintain their legitimacy (Kulali, 2022). Previous research has also argued that company size is a relevant moderator for sustainability disclosure (Abdi et al., 2022; Shakil, 2022). Drawing on legitimacy theory, this study examined whether the status of companies listed on an Islamic stock index can affect their ESG disclosure and whether company size plays a moderating role in this impact on ESG disclosure.

This study distinguishes sharia-indexed companies from non-sharia-indexed companies. The former of the two groups are companies that have passed the Financial Services Authority (OJK)'s screening while adhering to Islamic principles, which essentially include a strong dimension of social responsibility and business ethics. Sharia-indexed companies are required to adhere to a number of sharia criteria that prohibit destructive practices, such as those featuring elements of *riba* (usury) or *gharar* (uncertainty), and business activities deemed unethical, such as gambling and activities involving alcohol consumption (OJK, 2019). These principles are directly aligned with the ESG pillars, especially in the aspects of governance and social responsibility. Therefore, it is natural that companies listed on an Islamic stock index are expected to disclose more ESG information compared to companies that are not listed on an Islamic stock index.

In the environmental dimension, sharia principles encourage the preservation of natural resources and the sustainability of ecosystems. Therefore, sharia-indexed companies are expected to disclose more information about their efforts in maintaining environmental sustainability, with a level of aversion to environmentally damaging activities. In addition, many of these companies operate in environmentally friendly sectors, as they are prohibited from investing in destructive industries, such as those related to alcohol and tobacco (OJK, 2019). In the social aspect, sharia principles encourage companies to assume the responsibility for the welfare of society, distribute profits fairly, and take on an active role in community development (Billah, 2021; Hibatullah et al., 2023). Therefore, sharia-indexed companies are also expected to have more structured and consistent corporate social responsibility (CSR) programmes than other companies. Wider disclosure in the social dimension is also driven by the expectations of stakeholders who want Islamic companies to play a role in promoting social responsibility (Elnahas et al., 2021; Hatane & Soewarno, 2022). Finally, the most prominent of disclosures is one related to corporate governance, where Islamic companies are required to implement transparent, accountable, and fair governance under the supervision of a sharia supervisory board (Ramdani & Kamal, 2023).

Study results confirm the hypotheses proposed in this study, showing that companies indexed on a sharia stock index disclose ESG aspects at a higher rate than non-sharia-indexed companies. Regression test results indicate that the sharia-indexed status affects social disclosure, both when company size is taken into account and not. It also affects governance disclosure, but only when company size is taken into account. However, it does not significantly affect economic disclosure, both when the company size is taken into account and not. The absence of a significant effect on economic disclosure both when company size is taken into account and not and on governance when company size is not taken into account is due to economic and governance disclosure being mandatory standards that must be fulfilled by companies.

This study highlights the importance of ESG disclosure for companies listed on an Islamic stock index. The theoretical contribution of this study will add empirical evidence that the status of companies listed on an Islamic stock index encourages a higher level of ESG disclosure. This study also provides a managerial consideration for companies, underscoring that higher economic, social, and governance disclosure can be used as a corporate ESG communication strategy that shows the company's commitment to ESG aspects. This study recommends policy makers to consider more detailed disclosure obligations imposed on large companies, given their greater resources and higher public expectations with regard to social and environmental responsibility. Policy makers may also consider giving companies tax incentives as a reward for disclosing ESG information.

Literature Review

Legitimacy Theory

Reputation and legitimacy have been regarded as intangible assets that are critical to an organisation's performance and survival, especially within the competitive environment of today (Rindova et al., 2005; Weigelt & Camerer, 1988; Zimmerman & Zeitz, 2002). Companies, especially those listed on a sharia stock index, can use ESG disclosure as a tool to strengthen their reputation, which will contribute to their success, and eventually gain support from stakeholders (Díez-Martín et al., 2013). In addition, in the case of investment firms, the shift from neo-institutionalist theory to investment trust suggests that, aside from carrying out their core businesses (i.e., investment), these firms are also committed to gaining legitimacy from society by adhering to society's beliefs and norms, using sustainability ratings as a means of demonstrating their legitimacy and ethical business practices to investors (Drempetic et al., 2020). Nowadays, not only investment companies but also companies in any other sector need the trust of investors, and using ESG disclosure as evidence that they follow the beliefs and norms that apply in society will strengthen this trust.

Schaltegger & Hörisch (2017) provide two lines of arguments on why companies deal with sustainability: profit-seeking and legitimacy-seeking. The legitimacy-seeking orientation can be explained by the fact that CSR information serves as a strategic investment to enhance companies' reputation, which, as described above, is an intangible asset. If CSR reporting is beneficial in enhancing the companies' reputation, then it can be inferred that the companies anticipate better financial performance with an improved reputation (Wang et al., 2016). However, organisational reputation perceptions formed from non-financial perspectives are more relevant to future value than those driven by past financial performance (Raithel & Schwaiger, 2015). For instance, the sharia-indexed status of a company affects the company's reputation as it shows the company's quality (Olegario & McKenna, 2013; Podolny, 1993).

In organisational and management literature, status is defined as 'a socially constructed, inter-subjectively agreed upon, and accepted order or ranking of individuals, groups, organisations, or activities within a social system' (Washington & Zajac, 2005). Lee & Raschke (2023) discovered that the good reputation afforded by a status affects management's decisions to disclose economic, social, and corporate governance performance. Miotto et al. (2020) further state that the reputation of an organisation will have a positive impact on the organisation's legitimacy because reputation puts pressure on the organization to maintain its legitimacy. Being listed on a sharia stock index automatically gives a company a good name or status, which will affect its image, but coupling it with a high level of ESG disclosure will give the company a 'double' reputation, as ESG disclosure will increase the company's value in the eyes of stakeholders.

Hypotheses Development

Sharia-Indexed Company Status and ESG Disclosure

Sharia-indexed company status will significantly create demand for new shares (Alqahtani & Boulanour, 2017). This means that this status opens up a new opportunity for a company with a reputation for sharia compliance. In the perspective of legitimacy theory, companies listed on a sharia stock index are expected to adhere to ethical principles and demonstrate high levels of social responsibility, because the good name that arises from sharia indexation carries an implication that the indexed companies have fulfilled sharia criteria, including avoidance of usury and unethical business practices. This externally derived good name can unintentionally but directly build reputation for the sharia-indexed companies (Hawn, 2013). These companies can take advantage of the emerging reputation to show that they are concerned with the governance and social aspects of their businesses, and reporting them through ESG disclosure will strengthen their legitimacy in the eyes of the public. By comprehensively disclosing ESG information, companies can demonstrate that they are not only meeting basic compliance standards, but also committed to sustainability at large. ESG disclosure is a way for companies to further secure their reputation, reduce the risk of public scepticism, and maintain social legitimacy as organisations that consider their

responsibilities to society and the environment in their operations (Miotto et al., 2020; Weigelt & Camerer, 1988).

Previous research has proven that a positive corporate reputation will generate corporate legitimacy, which has an impact on the financial performance and market performance of a company (Wang et al., 2016). As reputation is an intangible resource that is difficult to replicate (Raithel & Schwaiger, 2015), companies will be driven to maintain their good reputation in a variety of ways, including by showing their commitment (Edi et al., 2020). Therefore, well-reputed companies, especially those listed on an Islamic stock index, will make more ESG disclosure to increase their corporate legitimacy (Lee & Raschke, 2023). Based on this explanation, the first set of hypotheses proposed in this study are as follows.

H1a: Sharia-indexed company status has a positive effect on economic disclosure.

H1b: Sharia-indexed company status has a positive effect on social disclosure.

H1c: Sharia-indexed company status has a positive effect on governance disclosure.

The Moderating Role of Company Size in the Effect of Sharia-Indexed Company Status on ESG Disclosure

The reputation of companies listed on an Islamic stock index signals to the market on the attention and expectations of investors towards them. These companies can utilise ESG disclosure to create insurance-like protection for them and a positive image in the eyes of stakeholders (Godfrey, 2005). However, each company differs in its capabilities according to its size. To be precise, company size can play an important role in enhancing the company's ESG disclosure (Kulali, 2022; Lerner & Fryxell, 1988). As large companies tend to get more attention from both the public and regulators, they feel more compelled to disclose ESG to maintain their social legitimacy and reputation (Ting, 2021). In contrast, small firms, with lower managerial complexity and limited resources, do not feel the same pressure, and so are more likely to maintain minimum compliance without any attempt to improve their ESG transparency. In this study, attention is directed to company size as a moderating variable, focusing on the extent to which it plays a role in sharia-indexed status's effect on companies' ESG disclosure.

Previous research has evidenced that company size can influence the company's ESG disclosure and moderate the influence of the company's sustainability disclosure (Abdi et al., 2022; Bissoondoyal-Bheenick et al., 2023; Dremptic et al., 2020). As a result, large companies need to increase social disclosure in order to maintain and strengthen their legitimacy in the eyes of the public (Amara & Ahmadi, 2024; Machmuddah et al., 2023). The community, as well as other external stakeholders such as social organisations, often demands more transparency in social aspects, especially from large companies, leading to higher pressure for large companies to focus on social disclosure (Ho et al., 2019). On the other hand, governance and economic aspects are more related to internal or regulatory interests (Alodat et al., 2023). The size of the company will lead to different managerial decisions on ESG disclosure, which is influenced by the company's sharia-indexed status, with the aim of maximising the company's reputation and legitimacy. Therefore, the next set of hypotheses below is proposed.

H2a: Sharia-indexed company status is indirectly associated with economic disclosure through company size.

H2b: Sharia-indexed company status is indirectly associated with social disclosure through company size.

H2c: Sharia-indexed company status is indirectly associated with governance disclosure through company size.

Methodology

Research Design

This study used a quantitative approach with the linear regression method to examine the effect of sharia-indexed company status on environmental, social, and governance (ESG) disclosure. In addition, this study

also examined the moderating role of company size on the effect of sharia-indexed company status on the disclosure of each ESG dimension (economic, social, and governance). The data used were secondary data from the annual reports of companies listed on the Indonesia Stock Exchange during the period 2016–2023.

Data Collection

This study used secondary data. The data on sharia-indexed company status were obtained from the website of the sharia stock index issued by the Indonesia Stock Exchange, which is named the Jakarta Islamic Index (JII). The data on ESG disclosure were obtained from Bloomberg's database, and the data on the control variables were obtained from Osiris's database.

Research Sample

The sample of this study consisted of 365 company observations, including sharia-indexed and non-sharia-indexed companies, with data taken from the period 2016–2023. The sample was selected using a purposive sampling method according to the following criteria: (1) companies with complete annual reports during the period 2016–2023; (2) companies listed or not listed on a sharia stock index during the period 2016–2023; and (3) companies disclosing ESG information in annual reports or sustainability reports. Companies that did not provide complete data or made inconsistent reports during the study period were excluded from the sample.

Research Variables

This study used three types of variables, namely independent, dependent, and moderating variables. These variables are explained in more detail below.

Dependent Variable

ESG disclosure as a dependent variable was measured using a disclosure index that refers to the Global Reporting Initiative (GRI) guidelines. This index measures the extent to which companies disclose information related to economic, social, and governance dimensions. Each company was assigned a score based on the number of items disclosed in its annual report for each of the ESG dimensions.

Independent Variable

The independent variable, sharia-indexed company status, was measured as a dummy variable, with a score of 1 assigned if a company was listed on an Islamic stock index and a score of 0 assigned if a company was not listed on an Islamic stock index.

Moderating Variable

Company size as a moderating variable in the relationship between sharia-indexed company status and ESG disclosure was measured based on the log of a company's total assets. A listed company is said to be large if its total assets exceeded IDR 10 trillion.

In addition to the variables above, the sales to total assets ratio (STA), profitability (ROA), leverage (DAR), liquidity (CR), growth, and market capitalisation (Capex) were also included as control variables in the models used in this study to reduce bias.

Data Analysis Method

This study used linear regressions to examine the relationship between sharia-indexed company status and ESG disclosure. The basic regression models used are as follows:

Model 1:

$$Eco = \beta_0 + \beta_1 Indexed + \beta_2 STA + \beta_3 ROA + \beta_4 DAR + \beta_5 CR + \beta_6 Growth + \beta_7 Capex + \epsilon_i$$

Model 2:

$$Sos = \beta_0 + \beta_1 Indexed + \beta_2 STA + \beta_3 ROA + \beta_4 DAR + \beta_5 CR + \beta_6 Growth + \beta_7 Capex + \epsilon_i$$

Model 3:

$$Gove = \beta_0 + \beta_1 Indexed + \beta_2 STA + \beta_3 ROA + \beta_4 DAR + \beta_5 CR + \beta_6 Growth + \beta_7 Capex + \epsilon_i$$

Model 1:

Model 4:

$$Eco = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 STA + \beta_4 ROA + \beta_5 DAR + \beta_6 CR + \beta_7 Growth + \beta_8 Capex + \epsilon_i$$

Model 5:

$$Sos = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 STA + \beta_4 ROA + \beta_5 DAR + \beta_6 CR + \beta_7 Growth + \beta_8 Capex + \epsilon_i$$

Model 6:

$$Gove = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 STA + \beta_4 ROA + \beta_5 DAR + \beta_6 CR + \beta_7 Growth + \beta_8 Capex + \epsilon_i$$

Model 7:

$$Eco = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 FirmSize * Indexed + \beta_4 STA + \beta_5 ROA + \beta_6 DAR + \beta_7 CR + \beta_8 Growth + \beta_9 Capex + \epsilon_i$$

Model 8:

$$Sos = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 FirmSize * Indexed + \beta_4 STA + \beta_5 ROA + \beta_6 DAR + \beta_7 CR + \beta_8 Growth + \beta_9 Capex + \epsilon_i$$

Model 9:

$$Gove = \beta_0 + \beta_1 Indexed + \beta_2 FirmSize + \beta_3 FirmSize * Indexed + \beta_4 STA + \beta_5 ROA + \beta_6 DAR + \beta_7 CR + \beta_8 Growth + \beta_9 Capex + \epsilon_i$$

Where:

ESG is the level of economic, social, and governance disclosure of the *i*-th company, *Indexed* is the status of the *i*-th company when listed on the sharia stock index (1 if indexed, 0 if not), *FirmSize* is the size of the *i*-th company (the log of total assets), *Controls* are control variables, such as *STA* (the sales to total assets ratio), *ROA* (profitability), *DAR* (leverage), *CR* (liquidity), *Growth*, and *Capex* (market capitalisation), and ϵ_i is the error term.

In addition, interaction analysis was conducted to examine whether company size served as an interaction variable in the effect of sharia-indexed company status on ESG disclosure, followed by moderated regression analysis (MRA) to examine the moderation effect.

Results

Descriptive Statistics

Descriptive statistics explain the distribution of research data. The descriptive statistics in this study are provided in the table below.

Table 1. Descriptive Statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|----------|-----|----------|-----------|------------|--------|
| ECO | 365 | 100.436 | 71.006 | 1 | 228 |
| SOS | 365 | 124.77 | 74.075 | 1 | 252 |
| GOVE | 365 | 61.384 | 28.326 | 1 | 107 |
| Indexed | 365 | .553 | .498 | 0 | 1 |
| Log TA | 365 | 10.484 | .419 | 9.572 | 11.546 |
| STA | 365 | 57.003 | 35.952 | 1 | 144 |
| ROA | 365 | 162.586 | 94.214 | 1 | 325 |
| DAR | 365 | .441 | .193 | .033 | .908 |
| CR | 365 | 2.368 | 2.145 | .27 | 27.21 |
| Growth | 365 | 183 | 105.511 | 1 | 365 |
| Capex | 365 | -157.839 | 295.561 | -2.624.563 | -.015 |

Source: Data Processed, 2024

Table 1 shows data on the variables derived from a sample of 365 company observations during the period 2016–2023, with significant variations. ECO, which measures the economic performance of companies, has a mean value of 51.408, with a standard deviation of 70.904, indicating a large variation between companies in economic performance. The minimum ECO value is 1, and the maximum is 228, signaling that some companies have much better economic performance than others. SOS, which measures the social performance of companies, has a mean value of 63.744, with a standard deviation of 81.316. The minimum value is 1, and the maximum is 252, indicating an even higher variation in corporate social contribution, where some companies have much greater social activities than others. For GOVE, which measures governance performance, the mean value is 58.994, with a standard deviation of 52.78, also showing a considerable variation among companies in terms of corporate governance. GOVE values range from 1 to 149, indicating the presence of companies that have less structured governance and those that implement governance well.

The sales to total assets ratio (STA) has a mean value of 68.528, indicating that the average company in the sample is able to generate sales of 68.53% of its total assets. However, a standard deviation of 48.71 indicates a large difference in efficiency between companies. The minimum STA value of 1 indicates that there are companies that are barely able to generate sales from their assets. Meanwhile, the maximum value of 200 indicates a very high asset utilisation efficiency. Firm size, measured as the log of total assets (Log TA), has a mean of 10.357, with a standard deviation of 0.481, indicating a relatively little variation in company size. Still, there is a difference observed between smaller companies (minimum Log TA of 8.708) and larger companies (maximum Log TA of 14.186).

Profitability, measured as return on assets (ROA), has a fairly high mean of 305.853, with a significant variation between companies, as shown by a standard deviation of 172.886. The values for ROA range from 1 to 604, indicating that some companies are very efficient in generating profits from their assets, while others are at a much lower level.

Leverage, measured as the debt to assets ratio (DAR), has a mean of 0.468, meaning that about 46.8% of the average company's assets are financed by debt. The standard deviation of 0.217 shows a high variation between companies, with some companies having a very low debt ratio (0.03), while others have a very high debt ratio of up to 1.659, signaling a quite high level of leverage. Liquidity, measured as current ratio (CR), has a mean of 2.268, indicating that the companies in the sample, in general, have fairly good liquidity. However, the large variation, as shown by a standard deviation of 2.223, indicates that there are highly liquid companies with a maximum CR of 28.13, while others have very low liquidity with a minimum CR of 0.01.

Capital expenditure per share (Capex) has a mean of 351.324, with a standard deviation of 206.904, indicating that companies have a large variation in capital investment. Some companies make almost no capital expenditure (a minimum value of 1), while others are very aggressive in making capital expenditure (a maximum value of 704). Finally, the growth rate (Growth) shows a mean of 359.79, with a standard deviation of 207.623, indicating a significant variation in growth between companies. A minimum value of 1 indicates very low growth, while a maximum value of 717 indicates very high growth.

Overall, the research data have shown that companies in the sample have large variations in financial performance, capital structure, and growth. This reflects significant differences in firm size, efficiency, and business strategy.

Pearson's Correlation

Pearson's correlation is often used as an initial indicator to detect multicollinearity among the independent variables in a regression model. If there is a high correlation between two independent variables (for example, $r > 0.8$ or $r < -0.8$), a potential multicollinearity problem may exist. From Table 2, it is known that there is no multicollinearity in the regression models used in this study.

Table 2. Pearson's Correlation

| Variable s | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---------------|-----------------|------------|------------|------------|-----------------|------------|-----------------|-----------------|-------|------|------|
| (1) ECO | 1.000 | | | | | | | | | | |
| (2) SOS | 0.254 * | 1.000 | | | | | | | | | |
| (3) GOVE | 0.350 * | 0.351 * | 1.000 | | | | | | | | |
| (4) Indexed | 0.143 * | 0.159 * | 0.211 * | 1.000 | | | | | | | |
| (5) Log TA | 0.255 * | 0.058 | 0.275 * | 0.321 * | 1.000 | | | | | | |
| (6) STA | 0.167 * | 0.017 | 0.098 | 0.196 * | - 0.296 * | 1.000 | | | | | |
| (7) ROA | 0.119 | 0.079 | 0.088 | 0.244 * | 0.069 | 0.274 * | 1.000 | | | | |
| (8) DAR | 0.056 | 0.099 | 0.070 | - 0.031 | 0.366 * | - 0.054 | - 0.171 * | 1.000 | | | |
| (9) CR | - 0.208 * | - 0.122 | - 0.122 | - 0.075 | - 0.277 * | - 0.061 | 0.043 | - 0.599 * | 1.000 | | |
| (10) Growth | - 0.117 | - 0.041 | - 0.032 | - 0.021 | - 0.010 | 0.124 | 0.056 | - 0.048 | 0.048 | 1.00 | |
| (11) | - | 0.008 | - | - | - | - | - | - | 0.149 | - | 1.00 |

| | | | | | | | | | | | |
|-------|------------|--|------------|------------|------------|-------|------------|-------|---|-----------|---|
| Capex | 0.179 * | | 0.248 * | 0.221 * | 0.353 * | 0.089 | 0.138 * | 0.020 | * | 0.02 6 | 0 |
|-------|------------|--|------------|------------|------------|-------|------------|-------|---|-----------|---|

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Data Processed, 2024

Research Model Selection

| Panel Data Effects Tests | | | |
|--------------------------|---|---|--|
| | Economic | Social | Governance |
| Chow Test | $F(2, 354) = 22.03$ Prob > $F = 0.0000$ | $F(2, 354) = 13.28$ Prob > $F = 0.0000$ | $F(2, 354) = 9.92$ Prob > $F = 0.0001$ |
| Hausman Test | $\chi^2(8) = (b - B)'(V_b - V_B)^{-1}(b - B) = 45.43$ Prob > $\chi^2 = 0.0000$ | $\chi^2(7) = (b - B)'(V_b - V_B)^{-1}(b - B) = 22.71$ Prob > $\chi^2 = 0.0019$ | $\chi^2(8) = (b - B)'(V_b - V_B)^{-1}(b - B) = 2.58$ Warning: $\chi^2 < 0 \implies$ the model fitted on these data fails to meet the asymptotic assumptions of the Hausman test; see <i>suest</i> for a generalised test. |
| Lagrange Multiplier Test | $\bar{\chi}^2(01) = 104.03$ Prob > $\bar{\chi}^2 = 0.0000$ | $\bar{\chi}^2(01) = 86.75$ Prob > $\bar{\chi}^2 = 0.0000$ | $\bar{\chi}^2(01) = 478.50$ Prob > $\bar{\chi}^2 = 0.0000$ |
| Results | Random Effects Model | Random Effects Model | VCE (Robust) |

Main Results

Tabel. 3. T-test Results

| Variable | Group | Mean | Std. Err |
|------------|-------------|----------|----------|
| Economic | Indexed | 109.5495 | 4.915592 |
| | Non-indexed | 89.1411 | 5.561053 |
| Social | Indexed | 135.322 | 5.137190 |
| | Non-indexed | 111.694 | 5.757846 |
| Governance | Indexed | 66.748 | 1.84896 |
| | Non-indexed | 54.736 | 2.304539 |

Source: Data Processed, 2024

| Variable | Difference | t-value | p-value | 95% CI |
|------------|------------|---------|---------|----------------|
| Economic | -20.409 | -2.75 | 0.006 | 93.12; 107.74 |
| Social | -23.628 | -3.05 | 0.003 | 117.14; 132.39 |
| Governance | -12.011 | -4.1 | 0.000 | 58.46; 64.29 |

Source: Data Processed, 2024

The average economic disclosure value of indexed companies is 109.5495, while that of non-indexed companies is 89.1411. The average social disclosure value of indexed companies is 135.322, while that of non-indexed companies is 111.694. The average governance disclosure value of indexed companies is 66.748, while that of non-indexed companies is 54.736. Economic disclosure has a mean difference between indexed and non-indexed companies of -20.409, a t -value of -2.75, and a p -value of 0.006, indicating a significant difference at the 1% level (0.01). Social disclosure has a mean difference between indexed and

non-indexed companies of -23.628, a *t*-value of -3.05, and a *p*-value of 0.003, indicating a significant difference at the 1% (0.01) level. Finally, governance disclosure has a mean difference between indexed and non-indexed companies of -12.011, a *t*-value of -4.1, and a *p*-value of 0.000, indicating a significant difference at the 1% level (0.01). Since the *p*-values for all ESG dimensions are < 0.05, the average differences in economic, social, and governance disclosure between indexed and non-indexed companies are all statistically significant. The confidence interval does not include 0, which confirms that these differences are significant. These results indicate that indexed companies have higher average economic, social, and governance disclosure values than non-indexed companies, and the differences are statistically significant. The next test relates indexed large companies to their ESG disclosure.

The resulting regression model equations for the effect of sharia-indexed company status on ESG disclosure are as follows:

Model 1:

$$Eco = 112.305 + 8.051Indexed + 0.255STA + 0.044ROA - 22.392DAR - 6.994CR - 0.088Growth - 0.029Capex + \epsilon_i$$

Model 2:

$$Sos = 108.214 + 23.052Indexed + -0.054STA + 0.057ROA + 24.392DAR - 2.943CR - 0.021Growth + \beta 70.016 + \epsilon_i$$

Model 3:

$$Gove = 50.853 + 8.461Indexed + 0.039STA + 0.007ROA + 6.586DAR - 0.667CR - 0.010Growth - 0.012Capex + \epsilon_i$$

Model 4:

$$Eco = -505.449 - 8.287Indexed + 61.208FirmSize + 0.545STA + 0.011ROA - 0.101DAR - 6.614CR - 0.101Growth - 0.004Capex + \epsilon_i$$

Model 5:

$$Sos = 206.760 + 25.658Indexed - 9.764FirmSize - 0.100STA + 0.063ROA + 31.867DAR + \beta 6CR - 0.019Growth - 3.004Capex + \epsilon_i$$

Model 6:

$$Gove = -127.652 + 3.740Indexed + 17.686FirmSize + 0.123STA - 0.003ROA - 6.953DAR - 0.558CR - 0.013Growth - 0.012Capex + \epsilon_i$$

Model 7:

$$Eco = -691.1597 + 283.1166Indexed + 79.26613FirmSize - 27.98684FirmSize*Indexed + 0.552898STA + 0.0128218ROA - 73.25226DAR - 6.599199CR - 0.1005275Growth - 0.0057445Capex + \epsilon_i$$

Model 8:

$$Sos = 14.82975 + 326.821Indexed + 8.89925FirmSize - 28.92414FirmSize*Indexed - 0.0921669 STA + 0.0643487ROA + 27.72884DAR - 2.988414CR - 0.0182897Growth + 0.0095351Capex + \epsilon_i$$

Model 9:

$$Gove = -214.2396 + 139.6069Indexed + 26.10624FirmSize - 13.04881FirmSize*Indexed + 0.1262273STA - 0.0021898ROA - 8.820206DAR - 0.5507623CR - 0.0132702Growth - 0.0128993Capex + \epsilon_i$$

The table below outlines the test results.

Table.4. The Role of Company Size in the Influence of Sharia-Indexed Company Status on ESG Disclosure

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|------------|---------------|---------------|---------------|------------|-----------|-----------|---------------|-------------|--------------|
| | Economic | Economic | Economic | Social | Social | Social | Governance | Governance | Governance |
| Intercept | 112.305*** | -505.449*** | -691.1597 | 108.214*** | 206.760 | 14.82975 | 50.853** * | -127.652*** | -214.2396*** |
| | -6.177 | (-4.495) | -4.25 | -5.505 | -1.634 | 0.08 | 5.71 | -2.81 | -3.21 |
| Indexed | 8.051 | -8.287 | 283.1166 | 23.052*** | 25.658*** | 326.821 | 8.461*** | 3.740 | 139.6069* |
| | -1.077 | (-1.068) | 1.53 | -2.852 | -2.940 | 1.57 | 2.71 | 1.16 | 1.84 |
| Moderation | | | -27.98684 | | | -28.92414 | | | -13.04881* |
| | | | -1.58 | | | -1.45 | | | -1.79 |
| STA | 0.255** | 0.545** * | 0.552898*** | -0.054 | -0.100 | 0.0921669 | 0.039 | 0.123*** | 0.1262273*** |
| | -2.466 | -4.863 | 4.94 | (-0.479) | (-0.792) | -0.73 | 0.89 | 2.54 | 2.75 |
| ROA | 0.044 | 0.011 | 0.0128218 | 0.057 | 0.063 | 0.0643487 | 0.007 | -0.003 | -0.0021898 |
| | -1.109 | (0.288) | 0.33 | -1.323 | -1.429 | 1.47 | 0.41 | -0.18 | -0.14 |
| Growth | -0.088** * | -0.101** * | -0.1005275*** | -0.021 | -0.019 | 0.0182897 | -0.010 | -0.013 | 0.0132702 |
| | (-2.636) | (-3.128) | -3.13 | (-0.571) | (-0.515) | -0.51 | -0.69 | -0.96 | -1.01 |
| DAR | -22.392 | 69.248*** | 73.25226*** | 24.392 | 31.867 | 27.72884 | 6.586 | -6.953 | 8.820206 |
| | (-0.969) | (-2.918) | -3.08 | (0.976) | -1.193 | 1.04 | 0.62 | -0.68 | -0.90 |
| CR | 6.994** * | 6.614** * | 6.599199*** | -2.943 | -3.004 | 2.988414 | -0.667 | -0.558 | 0.5507623 |
| | (-3.353) | (-3.301) | -3.30 | (-1.305) | (-1.332) | -1.33 | -0.54 | -0.49 | -0.67 |
| Capex | -0.029** | -0.004 | 0.0057445 | 0.016 | 0.012 | 0.0095351 | -0.019*** | -0.012** | 0.0128993** |
| | (-2.329) | (-0.284) | -0.45 | -1.182 | (0.824) | 0.67 | -4.40 | -3.05 | -2.47 |

| | | | | | | | | | |
|--------|-----|---------------|-----------------|-----|--------------|-------------|-----|---------------|-----------------|
| Log TA | | 61.208 *** | 79.26613 *** | | -9.764 | 8.8992 5 | | 17.686** * | 26.10624 *** |
| | | -5.561 | 5.00 | | (- 0.788) | 0.50 | | 4.13 | 4.01 |
| N | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |

Source: Data Processed, 2024; t-statistics in parentheses *p < 0.10, **p < 0.05, ***p < 0.01

Table 5. Robustness Test Results

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---------------|-------------------|---------------------|-----------------------|----------------|---------------|-------------------|----------------|---------------------|---------------------|
| | Econo mic | Econo mic | Econo mic | Social | Social | Socia l | Govern ance | Govern ance | Govern ance |
| Interce pt | 112.30 5*** | - 505.44 9*** | - 691.1597 *** | 108.21 4*** | 206.76 0 | 14.82 975 | 50.853** * | - 127.652* ** | - 214.239* ** |
| | -6.109 | (-4.439) | -4.19 | -5.444 | -1.614 | 0.08 | -6.873 | (-2.730) | -3.17 |
| Indexe d | 8.051 | -8.287 | 283.1166 | 23.052 *** | 25.658 *** | 326.8 21 | 8.461*** | 3.740 | 139.606 9* |
| | -1.065 | (-1.055) | 1.51 | -2.820 | -2.904 | 1.55 | -2.781 | -1.160 | 1.81 |
| Moderation | | | - 27.98684 | | | - 28.92 414 | | | - 13.0488 1* |
| | | | -1.55 | | | -1.43 | | | -1.77 |
| STA | 0.255** | 0.545** * | 0.552898 *** | -0.054 | -0.100 | .0921 669 | 0.039 | 0.123*** | 0.12622 7*** |
| | -2.439 | -4.803 | 4.87 | (- 0.474) | (- 0.782) | -0.72 | (0.922) | -2.632 | 2.71 |
| ROA | 0.044 | 0.011 | 0.012821 8 | 0.057 | 0.063 | .0643 487 | 0.007 | -0.003 | - 0.00218 98 |
| | -1.097 | (0.284) | 0.33 | -1.308 | -1.412 | 1.45 | (0.409) | (-0.182) | -0.14 |
| Growth | - 0.088** * | - 0.101** * | - 0.100527 5*** | -0.021 | -0.019 | -.0182 897 | -0.010 | -0.013 | - 0.01327 02 |
| | (-2.607) | (-3.089) | -3.08 | (- 0.565) | (- 0.509) | - 0.50 | (-0.721) | (-1.003) | -0.99 |
| DAR | -22.392 | - 69.248* ** | - 73.25226 *** | 24.392 | 31.867 | 27.72 884 | 6.586 | -6.953 | - 8.82020 6 |
| | (-0.958) | (-2.881) | -3.04 | (0.965) | -1.179 | 1.02 | (0.700) | (-0.705) | -0.89 |
| CR | - 6.994** * | - 6.614** * | - 6.599199 *** | -2.943 | -3.004 | - 2.988 414 | -0.667 | -0.558 | - 0.55076 23 |
| | (-3.316) | (-3.260) | -3.26 | (- 1.291) | (- 1.316) | -1.31 | (-0.786) | (-0.669) | -0.66 |
| Capex | - 0.029** | -0.004 | - .0057445 | 0.016 | 0.012 | .0095 351 | - 0.019*** | -0.012** | - 0.01289 9** |

| | | | | | | | | | |
|---------------------|----------|---------------|-----------------|--------|--------------|--------------|----------|---------------|-----------------|
| | (-2.303) | (-0.280) | -0.45 | -1.169 | (0.814) | 0.66 | (-3.817) | (-2.258) | -2.44 |
| Log TA | | 61.208* ** | 79.26613 *** | | -9.764 | 8.899 255 | | 17.686** * | 26.1062 4*** |
| | | -5.492 | 4.93 | | (- 0.779) | 0.49 | | -3.865 | 3.96 |
| Adj. R ² | 0.10 | 0.16 | 0.1682 | 0.03 | 0.03 | 0.031 4 | 0.08 | 0.12 | 0.1203 |
| N | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| F-stat | 6.564 | 9.983 | | 2.589 | 2.339 | | 5.552 | 6.914 | |

Source: Data Processed, 2024 t-statistics in parentheses *p < 0.10, **p < 0.05, ***p < 0.01

The first regression model used in this study is a random effects model (REM). Based on Table 4, REM proves to be a suitable model for this study, as shown by a p -value of the asymptotic test statistic that is greater than the 5% alpha. For the robustness test, this study uses the common effects model (CEM) test. These regressions examine the impact of sharia-indexed company status on ESG disclosure with firm size taken into consideration. Equations 2, 4, and 6 consider the effect of company size on ESG disclosure. From the table above, it is obtained that ESG disclosure in models 1, 4 and 7 is significant only in model 3 and the model with company size is significant in models 2 and 6. In Equation 2, company size has a coefficient of 61.208, with a positive direction, which is significant at the 1% level. In Equation 4, company size has a coefficient of -9.764, with a negative direction, which is not significant at the 10% level. In Equation 6, company size has a coefficient of 17.686, with a positive direction, which is significant at the 1% level. The consideration of company size increases the suitability of the models, as seen from the increasing statistical F value. Based on Sharma et al. (1981), in row 3, 6, and 9, firm size acts as a moderator on social disclosure by functioning as a homologue, adjusting the relationship without changing the direction of the effect. In contrast, on economic disclosure, firm size does not act as a moderator. On governance disclosure, firm size functions as a moderator with quasi-characteristics, which means that it only partially moderates the relationship between sharia-indexed company status and governance disclosure.

Discussion

The results of the first hypothesis testing show that companies' sharia-indexed status has no influence on their economic disclosure. Economic disclosure on its own right can increase investor confidence and help fulfil the expectations of regulators. Therefore, companies are encouraged to report this aspect of disclosure in detail, not because they are listed on a sharia stock index but because of the standard obligations that they must fulfill (Hossain & Taylor, 2007; Tasios & Bekiaris, 2014). By contrast, the sharia-indexed company status will have a significant influence on social and governance disclosure. As indexed companies often have higher public exposure, they are expected to disclose more transparent and complete information, including information on ESG aspects, in order to maintain their reputation and mitigate reputational risk (Khorilov & Kim, 2024). In this case, the status of companies listed on a sharia stock index is seen as an additional legitimisation mechanism expected by stakeholders through wider disclosure, especially on the Islamic capital market.

The second hypothesis testing results provide evidence that firm size can act as a interaction variable in the relationship between sharia-indexed company status and ESG disclosure. In companies listed on a sharia stock index, large company size is directly associated with increased economic, social, and governance disclosure. Large companies often focus more on economic and governance aspects that have a direct impact on financial reputation, increasing attractiveness in the eyes of investors. Company size is found significant in its interaction effect on the relationship between sharia-indexed company status and ESG disclosure, with coefficients that vary in direction and significance level across the various models shown in Table 4. This variance in significance and direction indicates that company size does influence managerial decisions regarding ESG disclosure, either by strengthening or weakening the relationship, depending on the specific context and management priorities. In Equation 2, firm size has a significant positive effect at the 1% level, indicating that large firm size increases economic disclosure more when firm size is taken into account. However, in Equation 5, firm size has an insignificant negative coefficient, which means that, under certain conditions, large firms still conduct social disclosure due to the need for corporate legitimacy. Finally, in Equation 8, firm size has a significant positive coefficient at the 1% level, which means that large companies will disclose corporate governance as evidence that they have governance reported in their financial statements in accordance with corporate governance standards.

This study's results also reveal that company size weakens the effect of sharia-indexed company status on social and governance disclosure. This is because company size can introduce additional costs and managerial complexity that complicate the decision-making process related to social and governance disclosure. Large companies, with longer hierarchies and bureaucracies, often have internal challenges in terms of coordination and supervision that make the implementation of social responsibility and

governance policies more difficult and less efficient. This is in line with the view that managers in large companies may not always prioritise social disclosure if they feel that short-term financial performance is more relevant to shareholders, particularly if the company has already gained legitimacy from its sharia-indexed status. This finding is further supported by Lee & Raschke (2023), who found that reputational status will influence companies in making ESG disclosure to strengthen their legitimacy in the eyes of shareholders.

In large companies, ESG disclosure is driven not only by sharia-indexed status but also by their need to maintain legitimacy and mitigate conflicts of interest between management and owners (Jensen, 1986). The complexity and costs associated with managing large companies can also be an obstacle, making ESG disclosure dependent on the balance between external pressures and internal constraints (Jensen & Meckling, 1976). In other words, company size introduces additional dynamics that make the effect of sharia-indexed company status on ESG disclosure variable. This is in line with the view that organisational structure and conflicts of interest within the company influence ESG disclosure decisions in terms of company size (Ho et al., 2019). Large companies are often in the public spotlight and become subject to higher expectations regarding social responsibility, especially when they are listed on a sharia stock index. Bissoondoyal-Bheenick et al. (2023), D'Amato & Falivena (2020), and Shakil (2022) also found that company size could moderate CSR disclosure. In conclusion, company size will weaken the effect of companies' sharia-indexed status on their social and governance disclosure as the companies gets bigger, but it cannot moderate the effect on economic disclosure.

Conclusion

The purpose of this study was to examine the extent of ESG disclosure of companies when listed on a sharia stock index. According to *t*-test results, companies listed on a sharia stock index disclose ESG information at a higher rate than those that are not listed on a sharia stock index. However, regression test results show that economic disclosure is not affected by this sharia-indexed status; only social and governance aspects show differences when company size is taken into account. Overall, company size's role as an interaction variable has been proven, as it can moderate the effect of sharia-indexed company status on disclosure in the social and governance aspects. Size will pose a challenge to companies listed on a sharia stock index. Therefore, companies should show more commitment to their ESG disclosure, as company size weakens the role of this indexed status. Regulators may consider more detailed disclosure obligations imposed on large companies, given their greater resources and higher expectations with regard to social and environmental responsibility. In addition, sharia-indexed companies should be given tax incentives as a reward if they disclose more ESG information.

The limitations of this study come from the fact that this study used an ESG disclosure index as a quantitative measure, so it did not evaluate the quality of ESG disclosure in depth. In addition, the influence of external variables, such as regulatory policies and macroeconomic changes, was not explicitly taken into account in the research models. Future research can further explore the role of managerial complexity and disclosure costs in large companies to understand why company size can have mixed effects on ESG disclosure. The use of additional control variables, such as ownership structure and risk management policies, may provide deeper insights into the factors that influence ESG-disclosure-related decision-making in large companies, especially those listed on an Islamic stock index.

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