

DOES ESG VALUE HAVE AN IMPACT ON A FIRM'S VALUE? LESSON LEARNED FROM INDONESIA

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ABSTRACT

With growing interests from investors and researchers in ethical investing, partly driven by the United Nations' Sustainable Development Goals (SDGs), this study examines the connection between Socially Responsible Investments (SRI) and Islamic finance. Given that these two approaches share common objectives, this study investigates the integration of Environmental, Social, and Governance (ESG) disclosure with Islamic screening principles that affect a firm's value. The study focuses on companies listed on the Indonesia Sharia Stock Index (ISSI). It employs pooled Ordinary Least Squares (OLS) with a Random Effect Model (REM) to analyze the impact of ESG on firm value. The findings indicate that ESG scores significantly affect a company's operations, financial performance, and market standing. However, the impact varies depending on the specific ESG factors. Governance factors demonstrate a stronger association with firm value compared to environmental, economic, and social factors. This results suggest that while ESG reporting is crucial, the specific focus areas highlighted in a company's sustainability disclosures can influence performance in different ways. Strong evidence shows that sustainability reports significantly impact organizational performance. Furthermore, sharia-compliant companies are encouraged to emphasize Islamic values within their sustainability reporting to enhance transparency and appeal to investors. For Sharia-compliant companies in Indonesia, strategically integrating and transparently reporting ESG principles, especially those aligning with Islamic values, is becoming essential for enhancing financial performance, complying with new regulations, and attracting Muslim investors.

INTRODUCTION

The Sustainable Development Goals (SDGs) were agreed upon by world leaders in 2015, serving as a framework to identify and finance socially advantageous initiatives (Yesuf & Aassouli, 2020). The SDGs aim to end poverty, reduce inequality, and protect the environment. From this perspective, they foster an awareness of “social responsibility” among investors and corporations (Shah et al., 2021). However, this outstanding progress raises questions among numerous stakeholders as to whether firms should be socially responsible and whether implementing Environmental, Social, and Governance (ESG) practices adds value, especially for *Sharia*-compliant companies.

Socially Responsible Investment (SRI), also known as Ethical Investment, emerged in the 1970s in response to specific customer demands. The fundamental premise of this concept lies in the philosophical, religious, or moral beliefs held by individuals or collective investors. These investors choose to exclude from their investment portfolio any stocks deemed to conflict with their convictions (Anas & Mounira, 2009). Ethical investment, as defined by Cowton (1994), refers to the use of ethical and social standards when choosing and overseeing investment portfolios, often comprising corporate stocks. Ethical investors prioritize not just the financial rewards and risks associated with their portfolios, but also the attributes of the companies in which their assets are invested. In ethical investment, these investors prioritize understanding the methods by which a firm generates its profits rather than solely focusing on the amount of money the company accrues.

According to Wilson (1997), Socially Responsible Investment (SRI) is an investment approach that uses a specific set of criteria to evaluate and select assets based on their social, environmental, and ethical impact. The concept of rejecting corporations through a screening approach is a shared objective between SRI (Socially Responsible Investing) and Islamic finance. However, Islamic investors may have distinct criteria for their screening process. Islamic finance encompasses investment activities that are deemed lawful according to Islamic Law.

The popularity of ethical investment has continued to increase over time, including Islamic investment (Erragraguy & Revelli, 2015). An Islamic investment policy adheres to the guidelines and principles of *Sharia*, which govern all aspects of human activity, including portfolio allocation, trading techniques, and dividend distributions (Girard & Hassan, 2008). In considering ethical investment, ESG has become a significant objective that attracts considerable attention from investors (Cowton & Sandberg, 2012). ESG investing aims to enhance investment performance, thereby increasing the availability of additional resources to support the mission. ESG is essential because firms that prioritize high ESG disclosure enjoy various financial benefits (Al Ansari et al., 2020). Research reveals that firms with high ESG scores tend to perform better compared to other investments. Additionally, companies with high ESG ratings experience lower capital costs, more stable profitability, and reduced

market risk when compared to companies with low ESG scores (Li et al., 2022; Wong et al., 2021).

ESG concerns have garnered attention from investors, shareholders, and governments due to their significant impact on risk management. For enterprises, these challenges have become a substantial component of their competitive strategy (Galbreath, 2013). Therefore, a critical topic that companies and shareholders must address is whether ESG disclosure policies may lead to favorable corporate performance (Alareeni & Hamdan, 2020). Previous research has primarily examined the impact of ESG scores on various measures of company performance and risk. A substantial body of research has found a positive correlation between ESG scores and firm value (Buallay, 2019; Buallay et al., 2020; Feng et al., 2021). Nevertheless, the empirical data regarding the correlation between ESG activities and business value remain unclear, as indicated by Azmi et al., (2021) and Giese et al., (2017).

The existing evidence on the relationship between ESG activity and corporate value is inconsistent. Several studies have indicated that examining the relationship between ESG components and business profitability may undermine the ethical considerations essential for society and the future investments required to uphold social and environmental standards (Richardson, 2009). According to Charfeddine et al., (2016), ethical investments exhibit subpar performance compared to their unscreened counterparts. Furthermore, other studies have demonstrated that Corporate Social Responsibility (CSR) can effectively decrease the expense of equity capital and mitigate firms' exposure to risk (Bae et al., 2018). However, CSR has not been found to have a significant correlation with firm values (Banerjee, 2007; Devinney, 2009). Hence, it is imperative to prioritize the examination of all ESG dimensions to assess their influence on company performance.

Due to the limitations of ESG measurement, its impact cannot be generalized. For example, Buallay (2020) compared the banking and manufacturing sectors in terms of ESG scoring and its impact on operational, financial, and market performance. The study revealed that ESG factors have a favourable impact on companies operating in the manufacturing industry, whereas they have an adverse impact on companies in the banking sector. Hence, the influence of ESG factors may vary for organizations that adhere to Sharia principles.

Islamic investment shares a similar characteristic in that it emphasizes both social and financial benefits, and is therefore considered a class of responsible investment. Islamic investment applies more specific criteria compared to SRI, such as excluding companies that generate interest, which may be regarded as socially irresponsible. Although the SRI concept is theoretically embedded in Islam (Dusuki, 2008; Williams & Zinkin, 2010), the foundational contexts of these two are different, and the combined effect is questionable. A *Sharia*-compliant firm would likely benefit more from combining ESG screening with *Sharia*-compliant investment strategies.

According to the Islamic Finance ESG Outlook by Thomson Reuters Refinitiv (2019), *Sharia*-compliant firms tend to have ESG scores that are, on average, 6% higher than those of other entities. This difference can even reach up to 10% for non-financial corporations. Therefore, with the growing market for ESG investing, Islamic investing is expected to experience significant growth potential and play a prominent role in the Islamic Finance Industry.

Moreover, integrating ESG and *Sharia* screening would be an alternative strategy for companies to engage with socially responsible investors. Few studies have integrated ESG and Islamic investment. While foundational studies like Shah et al., (2021) have evaluated the performance of ESG-*sharia* portfolios across various regions, and Kabir Hassan et al., (2021) have explored the impact of ESG and *Sharia* screenings on market risk, a clear gap persists in understanding how this integration impacts firm-level operational, financial, and market performance metrics collectively (ROA, ROE, and Tobin's Q). Furthermore, much of the existing ESG research, such as Buallay (2019, 2020), has focused on specific sectors, such as banking, or particular regions, including Europe and the MENA. There is limited research focusing on a broad spectrum of *Sharia*-compliant firms within a significant and distinct emerging Islamic market, such as Indonesia. These studies underscore a growing need for additional research to expand the Islamic finance industry, particularly in the realm of ethical investment strategies. Several limited studies have recommended incorporating ESG into Islamic investing (Erragraguy & Revelli, 2015; Kabir Hassan et al., 2021; Qoyum et al., 2022; Shah et al., 2021; Yesuf & Aassouli, 2020). Further research is needed to validate whether integrating Islamic screening and ESG would enhance a firm's value.

Following the recommendation of Shah et al., (2021) regarding ESG considerations, this study examines the impact of ESG scores on the value of *Sharia*-compliant firms within the emerging Indonesian market. Indonesia's prominence in the Islamic finance sector, as highlighted by the ICD-Refinitiv Islamic Finance Report (2022), positions it alongside Malaysia and the six countries of the Gulf Cooperation Council (GCC) as a major player. Despite Indonesia's status as the country with the largest Muslim population, there is a notable scarcity of empirical research that investigates explicitly the synergistic effects of ESG disclosure and *Sharia* screening on firm value across its publicly listed *Sharia*-compliant companies. This study directly addresses the geographical and contextual void, offering insights pertinent to one of the most significant Islamic economies.

This study addresses a critical knowledge gap by examining the impact of ESG activities on the values of *Sharia*-compliant enterprises. Specifically, the study focuses on evaluating the influence of ESG activities on both the present and future performance of these organizations. Building on previous research, this study employs Return on Assets (ROA) and Return on Equity (ROE) as indicators of current performance and Tobin's Q as a measure of future performance, thereby providing deeper insights into the implications of ESG disclosure. Two key contributions of this

study are the creation of empirical evidence on the value added to businesses by integrating Shariah screening with ESG scores and the valuable insights this study provides to investors, businesses, and scholars regarding the contribution of ESG to the Sustainable Development Goals (SDGs).

LITERATURE REVIEW

Stakeholder Theory

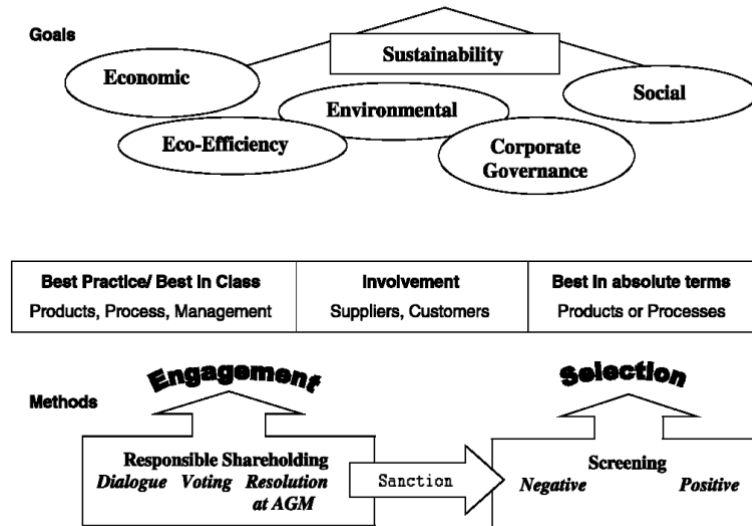
Stakeholder theory is a valuable approach to assessing an organization's performance in today's interconnected business landscape. It emphasizes that a business's operations should benefit all stakeholders with legitimate interests, without prioritizing one group over another (Freeman, 1984; Pinto, 2017). The holistic approach of Environmental, Social, and Governance (ESG) Initiatives, which focuses on creating value for all stakeholders rather than just shareholders, aligns with the idea that all legitimate stakeholders should benefit. Therefore, an organization's effectiveness depends on stakeholders' perceptions of its Environmental, Social, and Governance (ESG) initiatives (Handoyo & Anas, 2024). Positive perceptions can boost a company's reputation, attract and retain clients, foster investor confidence—a crucial component of financial performance and competitive advantage—and promote advocacy, loyalty, and stakeholder engagement. However, unfavorable views can lead to divestitures, boycotts, and significant damage to a business's reputation, all of which may have long-term negative consequences (Bellucci et al., 2019; Razak et al., 2023). This highlights the importance of firms actively engaging with stakeholders to understand their expectations and values, so that ESG strategies can be properly tailored.

Ethical Investment Strategies

Socially responsible investing (SRI), also known as ethical investment, gained prominence in the 1970s by promoting a clear ethical goal, such as supporting boycott and divestment movements to protest South Africa's apartheid regime. Initially, investors placed greater importance on addressing social or environmental issues out of a sense of duty to improve the world and fulfill moral obligations, rather than solely pursuing financial gain (Richardson, 2009). Since the late 1990s, however, SRI has experienced a resurgence in mainstream financial markets, raising concerns about its drift away from its original ethical stance. Increasingly, responsible investors contend that businesses should consider social and environmental issues from a business perspective, believing that SRI can lead to both moral virtue and financial success.

The diversity of terms such as "ethical investment", "socially responsible investment", "social screening", and "responsible shareholding" can lead to confusion regarding the distinctions among various ethical investment practices (Broadhurst et

al., 2003). Figure 1 presents an ethical investment strategies framework, illustrating the position of each term and enabling institutions to develop their own strategies by combining different goals and methods.



Source: (Broadhurst et al., 2003)

Figure 1: Ethical Investment Strategies: Goals and Methods

Concurrently, the global financial industry has increasingly recognized the millions of investors worldwide who seek to align their financial activities with their religious beliefs (Lyn & Zychowicz, 2010). Faith-based (FB) investing, particularly Islamic investing, has experienced unprecedented growth, with most studies focusing on the performance and investment of Islamic indices. Islamic banking and SRI exhibit distinct parallels in their goals and objectives, including advancing societal well-being through the application of ethical principles and the integration of Islamic values into ethical investment strategies (Erragraguy & Revelli, 2015; Saba et al., 2021).

Faith-based investing, including Islamic finance, employs a screening methodology as part of its ethical investment approach. "Screening" refers to applying a specific set of criteria to determine whether an organization should be included or excluded based on its business activities or corporate conduct. These screens can be positive, assessing companies against favorable criteria such as strong corporate governance and corporate social responsibility (CSR) policies, or negative, eliminating companies involved in specific industries like animal testing or gambling.

Islamic finance adheres explicitly to Sharia law principles, which encourage profit and loss sharing between banks and investors, prohibit interest (*riba*), discourage excessive uncertainty and gambling, restrict the financing of specific economic activities, and promote risk sharing, profit sharing, and asset-backed financial transactions (Jaballah et al., 2018). Consequently, Islamic enterprises differ from their conventional counterparts because they must comply with specific business

screening standards (e.g., explicit prohibitions on industries such as alcohol and entertainment) and undergo financial scrutiny. These unique characteristics may result in differential behaviors compared to conventional firms (Wilson, 1997). Islamic fund providers utilize Islamic indices, such as the Indonesia Sharia Stock Index (ISSI), where inclusion requires companies to undergo a series of screening filters to ensure their core business activities align with Sharia principles and meet defined financial criteria. Although screening procedures vary across stock exchanges, these variations do not contravene Sharia principles. In Indonesia, shares included in Islamic market indices must meet predetermined criteria established by the Financial Services Authority (Otoritas Jasa Keuangan, 2023).

While some investors may prioritize supporting a worthy cause over maximizing returns, the performance of ethical funds remains a significant concern. The ethical investment industry aims to ensure that its backers are not disadvantaged compared to those invested in purely commercial funds, leading investors often to expect ethical funds to deliver above-average performance. However, the concept of a firm being “sharia-compliant” and its implications for its value or profitability have yet to be thoroughly examined.

Sustainability Reporting: Environmental, Social, and Governance (ESG) Activities

Complementing ethical investment strategies, sustainability disclosure particularly through the Environmental, Social, and Governance (ESG) framework has become a novel and significant approach to corporate reporting. ESG reporting aims to provide a comprehensive overview of a corporation’s stance and actions across economic, environmental, and social dimensions, driving future value through strategic policies and addressing diverse stakeholder interests (Buallay et al., 2020; Jensen & Berg, 2012; Nobanee & Ellili, 2016). This additional qualitative and quantitative data provides a holistic view of a company's commitment to issues ranging from environmental conservation to market ethics and societal impact, thereby enhancing transparency by clarifying the links between financial performance and ESG initiatives (Buallay, 2019; Steyn, 2014).

The concept of ESG was initially introduced in the United Nations’ Principles for Responsible Investment report, which advocated for the integration of ESG scores into investment decisions. Today, ESG criteria are widely regarded as essential indicators of managerial competence, risk mitigation, and non-financial performance, valued for their potential impact on investment portfolios (Richardson, 2009). Indeed, numerous studies and reports suggest that ESG disclosure can bolster corporate reputation, yield competitive advantages, and lead to improved company outcomes, including enhanced financial performance.

Previous Study and Hypothesis Development

Studies investigating the relationship between ESG activities and firm performance face challenges due to variations across industries, the amalgamation of various ESG aspects, and differing periods (Azmi et al., 2021; Buallay et al., 2020; Huang, 2021; Khemir et al., 2019; Saygili et al., 2021). The impact of ESG practices is likely to vary and be subject to debate due to the unique characteristics of each industry. Companies within each industry confront unique challenges and stakeholder expectations. For instance, mining companies may benefit more from prioritizing environmental or governance aspects. Regulatory and stakeholders' demands from external entities lead to the specialization of social interests (Griffin & Mahon, 1997).

Several studies have examined the integration of Islamic investment with Environmental, Social, and Governance (ESG) principles. For instance, Yesuf and Aassouli (2020) analyzed the performance of SRI and Islamic funds and found no clear difference in their performance, suggesting alignment between the two. This study was extended by Shah et al., (2021), who added a discussion exploring areas that have not been previously discussed, specifically the possibility of alignment between Islamic investment and ESG. This study investigated ESG-Shariah cases across the regions and periods. Furthermore, Hassan et al., (2021) also empirically analyzed the relationship between ESG and Shariah screening, as well as their impact on market risk, finding that Shariah-compliant companies with higher ESG scores exhibit greater risk mitigation effects.

Price Waterhouse Coopers (2021) reported that ESG for companies to generate revenue. Since environmental, social, and governance (ESG) reports can be part of a company's reputation and contribute to developing a positive company image among the public and stakeholders. Several studies have investigated the correlation between ESG factors and firm value, also referred to as "firm performance." Notably, prominent among these studies are those by Barth et al., (2017), Buallay (2019, 2020), Buallay et al., (2020), and Wong et al., (2021). Buallay (2019) studied 235 European banks over ten years and demonstrated that the disclosure of ESG factors has a substantial impact on the operational.

Buallay et al., (2020) examined the ESG scores of 59 banks from the Middle East and North Africa (MENA) listed on stock markets. They also investigated how these scores influenced the banks' operational, financial, and market performance. Their study revealed that the disclosure of ESG factors impacted the performance of banks, resulting in economic benefits for shareholders. However, the relationship between ESG ratings varies among different institutions. This is reinforced by Wong et al., (2021) research, which found that ESG practices can strengthen a firm's value in a case study conducted in Malaysia.

The findings above provide the basis for hypothesis development:

H1: ESG Score has a significant impact on Return on Assets (ROA).

H2: Economic Score has a significant impact on Return on Assets (ROA).

H3: Environment Score has a significant impact on Return on Assets (ROA).

- H4: Social Score has a significant impact on Return on Assets (ROA).
H5: Governance Score has a significant impact on Return on Assets (ROA).
H6: ESG Score has a significant impact on Return on Equity (ROE).
H7: Economic Score has a significant impact on Return on Equity (ROE).
H8: Environment Score has a significant impact on Return on Equity (ROE).
H9: Social Score has a significant impact on Return on Equity (ROE).
H10: Governance Score has a significant impact on Return on Equity (ROE).
H11: ESG Score has a significant impact on Tobin's Q.
H12: Economic Score has a significant impact on Tobin's Q.
H13: Environment Score has a significant impact on Tobin's Q.
H14: Social Score has a significant impact on Tobin's Q.
H15: Governance Score has a significant impact on Tobin's Q.

RESEARCH METHODS

Study sample

In data selection, this study employs several stages in the sample selection process. This is completed to ensure that the sample companies are those with ESG reports and are listed on the Islamic index. First, the Sharia screening process considered all companies listed in the Indonesia Sharia Stock Index (ISSI), and data were collected for 469 companies listed in the ISSI from 2015 to 2023. Afterwards, the initial screening was then conducted to identify which of these companies have ESG scores and have adequate sustainability reporting. As anticipated, a substantial number of companies did not provide the necessary data to analyze the extent of their sustainability reporting. Two criteria were applied for the final selection:

1. Continuous listing on the ISSI for the past nine years; and
2. Availability of ESG data through the Global Reporting Initiative (GRI).

This selection process resulted in a final sample comprising 15 companies observed between 2015 and 2023. However, to minimize inconsistencies in the criteria for ESG measurement, many researchers employ ESG ratings by external agencies (Yoon et al., 2018). This study utilizes data from the Global Reporting Initiative (GRI), as the GRI has pioneered corporate sustainability reporting standards. Its framework was developed in collaboration with international organizations, including the OECD and the UN Global. Given the potential implications of a company's ESG activities for stakeholders, investigating the relationship between ESG disclosure and performance is essential.

Variables

The company's performance measurement, also known as the dependent variables, was quantified in terms of operational performance (Return on Assets—ROA), financial performance (Return on Equity—ROE), and market performance

(Tobin's Q—TQ), as employed by Buallay (2019). Meanwhile, sustainability reporting, as the independent variable in this analysis, was assessed using four disclosure metrics: economic, environmental, social, and corporate governance (de Villiers et al., 2017).

Two categories of control variables were integrated into the analysis to mitigate the potential endogeneity problems. Following the methodology of Buallay (2019) and Azmi et al., (2021), these control variables combined company size and efficiency. The schematic representation of the study model encompasses the dependent, independent, and control variables. The dependent, independent, and control variables, which are illustrated in Table 1.

Table 1
Variables and Measurement

Variable	Measurements	Source
<i>Dependent</i>		
Return on assets - ROA	Net income/total assets	Financial Statement
Return on Equity - ROE	Net income/shareholder's equity	Financial Statement
Tobin's Q	Book value of total assets minus the book value of common equity plus market value of common equity/ book value of total assets	Financial Statement
<i>Independent</i>		
<i>Main Variables</i>		
ESG	A composite score derived from multiple ESG parameters.	GRI
EN	Score derived from a variety of environmental factors	GRI
EC	Score derived from a variety of economic factors	GRI
S	Score derived from a variety of social factors	GRI
G	Score derived from a variety of governance factors	GRI
<i>Control variables</i>		
Size (TA)	Total assets	Financial Statement
Efficiency (EFF)	Operating revenue/total income	Financial Statement

Methods

This study employs panel data regression analysis to examine the relationship between sustainability reporting and firm performance. To determine the most appropriate estimation technique for the panel data, diagnostic tests, including the Hausman test, were conducted. The results indicated that the Random Effects Model (REM) is the preferred approach for achieving the research objective of analyzing the impact of ESG factors on firm performance. Here is the breakdown of the variables:

$$ROA_{i,t} = \beta_0 + \beta_{1t} + \beta_2 Ec_{i,t} + \beta_3 En_{i,t} + \beta_4 S_{i,t} + \beta_5 G_{i,t} + \varepsilon_{i,t} \dots \dots \dots (1)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 Ec_{i,t} + \beta_3 En_{i,t} + \beta_4 S_{i,t} + \beta_5 G_{i,t} + \beta_6 Sz_{i,t} + \varepsilon_{i,t} \dots \dots \dots (2)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 Ec_{i,t} + \beta_3 En_{i,t} + \beta_4 S_{i,t} + \beta_5 G_{i,t} + \beta_6 EFF_{i,t} + \varepsilon_{i,t} \dots \dots \dots (3)$$

$$ROE_{i,t} = \beta_0 + \beta_1t + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \varepsilon_{i,t} \dots \dots \dots (4)$$

$$ROE_{i,t} = \beta_0 + \beta_1ESG_{i,t} + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \beta_6Sz_{i,t} + \varepsilon_{i,t} \dots \dots \dots (5)$$

$$ROE_{i,t} = \beta_0 + \beta_1ESG_{i,t} + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \beta_6EFF_{i,t} + \varepsilon_{i,t} \dots \dots \dots (6)$$

$$Tobin'sQ_{i,t} = \beta_0 + \beta_1t + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \varepsilon_{i,t} \dots \dots \dots (7)$$

$$Tobin'sQ_{i,t} = \beta_0 + \beta_1ESG_{i,t} + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \beta_6Sz_{i,t} + \varepsilon_{i,t} \dots \dots (8)$$

$$Tobin'sQ_{i,t} = \beta_0 + \beta_1ESG_{i,t} + \beta_2Ec_{i,t} + \beta_3En_{i,t} + \beta_4S_{i,t} + \beta_5G_{i,t} + \beta_6EFF_{i,t} + \varepsilon_{i,t} \dots (9)$$

Where:

ROA, ROE, and Tobin's Q are dependent variables that the three models will measure. *ESG* is the independent variable, representing the Global Reporting Initiative (GRI) index, which combines the environmental, social, and corporate governance disclosure of company *i* in period *t*. *Sz*, and *EFF* are control variable. *Sz* represents the size of the company, measured as total assets for company *i* in period *t*. *EFF* represents efficiency, measured as the cost-to-income ratio. The constant term represents the regression equation's intercept, which is the coefficient of the independent and control variables, indicating the strength and direction of their respective relationships with the dependent variable. The error term captures unobserved factors that impact the dependent variable but remain unaccounted for in the model.

Model validation techniques

The study employed Pooled Data Regression under the general linear model to examine the relationship between ESG disclosure and performance.

Table 2
Model Diagnostics

Models	Autocorrelation test	Heteroscedacity test	
	Durbin-Watson	Breush-Pagan	Probability
ROA	1.2820	255.81	0,000
ROE	1.2766	345.01	0,000
TQ	1.1283	255.59	0,000

Source: Data Processed

A fundamental assumption in regression models is the absence of heteroscedasticity. To assess this assumption, the Breusch-Pagan test was conducted. As shown in Table 2, the p-values for all three models are below the conventional significance level, leading to the rejection of the null hypothesis of homoscedasticity. Therefore, the presence of heteroscedasticity within the models is confirmed.

Furthermore, to assess potential autocorrelation concerns in the study models, the Durbin-Watson (DW) test was conducted. However, the DW values presented in Table 2 do not fall within the conventional range of (1.5 -2.5). This discrepancy suggests the presence of autocorrelation issues within the models, which may impact the outcomes of the regression analysis. To mitigate this concern and ensure precise standard error estimations, the results utilized to test the hypothesis are based on robust standard errors that account for heteroscedasticity.

Selection of the regression approach

Panel or pooled regression models provide a more comprehensive and detailed analysis by incorporating a wider range of information, reducing inter-variable correlation, increasing degrees of freedom, and improving efficiency (Gujarati, 2003). These models are classified into fixed-effect (FE) and random-effect (RE) approaches. To determine the most appropriate technique, the Hausman test was employed.

The null hypothesis of the Hausman test posits that the fixed effects (FE) and random effects (RE) approaches are equally efficient. Rejecting the null hypothesis indicates the unsuitability of the random-effects approaches and favors the fixed-effects approach.

As shown in Table 4, the Hausman- χ^2 statistic lacks statistical significance, implying that the random-effect model (RE) accurately represents the relationship between ESG disclosure and performance. Therefore, the random-effect approach is deemed appropriate for this study.

RESULT

Descriptive Analysis

This section presents descriptive statistics for the variables employed in the study. As illustrated in Table 3, the mean ESG score for Sharia-compliant companies is 0.642. Among the ESG sub-components, governance disclosure exhibits the highest mean value (0.855), followed by economic (0.551) and social (0.533) disclosures. Environmental disclosure yields the lowest mean score (0.446), indicating a potential area for improvement among Sharia-compliant companies. The prioritization of corporate governance disclosure is underscored by its positive impact on various facets of firm performance. While the mean values for economic, social, and environmental disclosures are comparatively lower, there remains scope for enhancement to optimize their benefits.

Regarding company performance, the mean values for ROA (0.093), ROE (0.203), and Tobin's Q (2.299) are all positive.

Table 3
Descriptive Analysis

<i>Variables</i>	<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>SD</i>
ROA	0.093	0.064	0.454	-0.119	0.097
ROE	0.203	0.120	1.451	-0.817	0.331
Q	2.299	1.241	23.286	0.000	3.715
ESG	0.642	0.654	1.000	0.146	0.175
EC	0.551	0.529	1.000	0.000	0.267
EN	0.479	0.438	1.000	0.000	0.277
S	0.533	0.500	1.000	0.000	0.263
G	0.855	0.923	1.000	0.273	0.179
TA	30.479	30.589	32.668	28.634	0.899
EFF	3.356	0.271	228.945	-17.442	23.455

Source: Data Processed

The robustness of a linear model depends on the assumption of low correlation among the independent variables. Excessive multicollinearity can result in inflated standard errors of estimated coefficients. Table 4 presents the results of a collinearity test conducted on the independent variables, indicating correlation coefficients with absolute values below 1.00. These coefficients suggest that the models are not subject to severe multicollinearity issues. According to Gujarati (2003), a Variance Inflation Factor (VIF) exceeding 10 indicates no substantial multicollinearity issues concerning the respective independent variable. Through pooled regressions (results not disclosed), it is observed that the VIF values for all independent variables remain below 10, indicating the absence of significant collinearity issues within the models.

Table 4
Collinearity tests

<i>Variables</i>	ESG	EC	EN	S	G	TA	EFF
ESG	1.0000						
EC	0.6229	1.0000					
EN	0.7071	0.5048	1.0000				
S	0.7929	0.6443	0.6591	1.0000			
G	0.4299	0.0499	0.1729	0.1772	1.0000		
TA	0.1849	-0.0021	0.1730	0.1841	0.0826	1.0000	
EFF	0.0093	-0.0142	0.1043	-0.0069	0.0740	0.0752	1.0000

Source: Data Processed

Empirical Results

Several test were conducted to determine the appropriate panel data regression model. Test I indicating Chow test, to select between POLS and and FE; test II indicating Lagrange Multiplier test, to decide between POLS and RE; and test III indicating Hausman test, to decide between FE and RE. The result across diverse dependent variables indicates that the random-effects (RE) model is more suitable for

analyzing the data, validating the study's initial assumption, due to a p-value exceeding 5% (refer to Table 5).

Table 5
Model Selection

	ROA			ROE			Tobin's Q		
	Test I	Test II	Test III	Test I	Test II	Test III	Test I	Test II	Test III
Chi-Sq.	8.209					11.115	13.279	12.136	12.231
Statistic	5	9.5852	11.5935	11.1005	10.3037	8	7	5	2
Chi-Sq. d.f.	5	6	6	5	6	6	5	6	6
Prob.	0.145	0.143	0.072	0.052	0.112	0.085	0.051	0.059	0.057

Source: Data Processed

The study developed three models to examine the relationship between ESG and the disclosure of its sub-components with operational, financial, and market performance. Tables 6, 7, and 8 present the findings of the regression analysis using panel data to assess the study's hypothesis and achieve its objective. These results illustrate the impact of independent and control variables on the dependent variables.

Table 6
Regression Estimates – ROA model

Variables	Model 1			Model 2			Model 3		
	β	t-statistic	Sig.	β	t-statistic	Sig.	β	t-statistic	Sig.
<i>Independent variables</i>									
ESG	-0.1379	0.48933	0.6254	0.0015	0.0285	0.9773	0.0239	0.4246	0.6719
EC	-0.1071	-1.23094	0.2206	-0.0209	-0.821	0.4131	-0.0339	-1.2756	0.2044
EN	0.0182	-0.15477	0.8773	-0.0158	-0.6942	0.4888	-0.0021	-0.0892	0.9291
S	0.1351	0.95277	0.3425	0.0156	0.5123	0.6093	0.0312	0.9828	0.3276
G	0.0743	-1.6635	0.0986**	-0.0492	-1.7048	0.0907**	-0.0485	-1.5815	0.1162
<i>Control variables</i>									
TA				0.0525	3.2521	0.0015*			
EFF							-0.0006	-1.4515	0.7411
F	0.9992**			2.6281**			0.8305**		
R2	0.0373			0.1097			0.0374		
Adjusted R2	0.0029			0.0679			0.0076		

Notes: ** significant at 10% level, * significant at 5% level.

Source: Data Processed

Table 7
Regression Estimates – ROE model

Variables	Model 1			Model 2			Model 3		
	β	t-statistic	Sig.	β	t-statistic	Sig.	β	t-statistic	Sig.
<i>Independent variables</i>									
ESG	0.1462	1.1997	0.2324	0.1185	0.9625	0.3376	0.1520	1.2335	0.2197
EC	-0.0493	-0.8438	0.4003	-0.0378	-0.6444	0.5205	-0.0476	-0.8114	0.4186
EN	-0.0665	-1.2895	0.1995	-0.0796	-1.5241	0.1299	-0.0700	-1.3256	0.1873
S	0.0587	0.8453	0.3995	0.0436	0.6237	0.5339	0.0579	0.8312	0.4074
G	-0.1346	-2.0264	0.0448*	-0.1333	-2.0154	0.0460*	-0.1378	-2.0516	0.0422*
<i>Control variables</i>									
TA				0.0569	1.3676	0.1738			
EFF							0.00142	0.3404	0.7341
F	1.3291**			1.4392**			1.1279**		

R2	0.0489	0.0632	0.0502
Adjusted R2	0.0121	0.0193	0.0057

Notes: ** significant at 10% level, * significant at 5% level.

Source: Data Processed

Table 8
Regression Estimates – Tobin's Q model

Variables	Model 1			Model 2			Model 3		
	β	t-statistic	Sig.	β	t-statistic	Sig.	β	t-statistic	Sig.
<i>Independent variables</i>									
ESG	3.7357	1.9129	0.0580**	3.6663	1.8476	0.0670**	3.7978	1.9213	0.0569**
EC	-0.1107	-0.1190	0.9055	-0.0486	-0.0515	0.9590	-0.0803	-0.0857	0.9319
EN	-1.4477	-1.7516	0.0822**	-1.4876	-1.7684	0.0794**	-1.4657	-1.7309	0.0859**
S	-2.1142	-1.9025	0.0593**	-2.1896	-1.9437	0.0541**	-2.1427	-1.9191	0.0572**
G	-1.3585	-1.2766	0.2041	-1.3704	-1.2815	0.2023	-1.3957	-1.2963	0.1972
<i>Control variables</i>									
TA				0.1902	0.3285	0.7430			
EFF							0.0009	0.1351	0.8927
F	1.7328**			1.7319**			1.7117**		
R2	0.0731			0.0751			0.0745		
Adjusted R2	0.0372			0.0317			0.0311		

Notes: ** significant at 10% level, * significant at 5% level.

Source: Data Processed

The impact of overall ESG disclosure on company performance presents a nuanced picture. Specifically, the overall ESG parameter was found to be statistically significant for financial performance (ROE), albeit negatively (β ranging from -0.6408 to -0.6708, significant at the 10% level across the three models). This suggests that, within the studied sample, higher overall ESG disclosure is associated with lower financial performance. However, this direct measure of overall ESG disclosure did not show a significant relationship with operational performance (ROA) or market performance (Tobin's Q). Despite these specific findings from the regression models, the paper maintains that the ESG results overall indicate a noteworthy influence on performance. Furthermore, it is suggested that integrating innovative strategies and focusing on economic, social, and governance consciousness holds the potential to enhance companies' financial value and maintain or augment their stakeholder value.

Meanwhile, the ESG sub-components indicated various outcomes. Economic factors were statistically significant to ROA (β ranging from -0.09 to -0.11, significant at the 5% level), ROE (β ranging from -0.26 to -0.28, significant at the 10% level), and Tobin's Q (β ranging from -3.53 to -3.81, significant at the 5% or 10% level). The findings highlighted how the company manages its financial resources and operations sustainably and responsibly, strengthening the firm's values in operational, financial, and market terms. Social factors are statistically significant to operational and financial performance. It indicates that social disclosure enhances the return on assets (ROA) (β approx. 0.12 to 0.14, significant at the 5% level) and return on equity (ROE) (β approx.

0.46 to 0.47, significant at the 5% level) through the firm's reputation and customer loyalty. The governance factor is statistically significant to ROE (β approx. 0.43 to 0.46, significant at the 5% level) and Tobin's Q (β approx. 4.15 to 4.33, significant at the 10% level). It suggests that transparency and accountability foster investor confidence in the firm's management. During the examination of control variables, it is demonstrated that the presence of control variables consistently supports the effect of ESG parameters and their sub-components on firm value. As a result, according to these findings, generally, the disclosure of sustainability reports has an impact on an organization's operational, financial, and market performance (Table 9).

Table 9
Summary matrix: Impact of ESG Factors on Firm Performance

<i>Variable Dependent</i>	<i>Variable Independent</i>	<i>Result</i>	<i>Remark</i>
ROA (Operational Performance)	Overall ESG	Not Significant	Rejected
	Economic (EC)	Not Significant	Rejected
	Environmental (EN)	Not Significant	Rejected
	Social (S)	Not Significant	Rejected
	Governance (G)	Positive **	Accepted
ROE (Financial Performance)	Overall ESG	Not Significant	Rejected
	Economic (EC)	Not Significant	Rejected
	Environmental (EN)	Not Significant	Rejected
	Social (S)	Not Significant	Rejected
	Governance (G)	Negative *	Accepted
Tobin's Q (Market Performance)	Overall ESG	Positive **	Accepted
	Economic (EC)	Not Significant	Rejected
	Environmental (EN)	Negative **	Accepted
	Social (S)	Negative **	Accepted
	Governance (G)	Not Significant	Rejected

Notes: ** significant at 10% level, * significant at 5% level.

Source: Data Processed

DISCUSSION

ESG Performance on Sharia-Compliant Firms

One of the key findings of this research is the positive correlation between a company's overall ESG score and its market value, as proxied by Tobin's Q. The finding suggests that the market assigns a valuation premium to Sharia-compliant firms in Indonesia that demonstrate a strong and holistic commitment to environmental, social, and governance principles. It indicates that investors consider overall ESG performance not a hindrance, but rather a primary indicator of a company's long-term sustainability and strategic quality.

This finding finds robust theoretical grounding in several established frameworks. Primarily, it aligns with Stakeholder Theory, which posits that effectively managing relationships with all key stakeholders—employees, customers, suppliers, and the community—builds invaluable intangible assets such as brand reputation, customer loyalty, and a "social license to operate." The market recognizes this

enhanced corporate standing and resilience, rewarding the firm with higher valuations.

The academic literature largely supports this positive association. A vast and growing body of research Buallay (2020); Khan (2022); and Zaborovskaia et al., (2020) confirms that firms with superior ESG performance tend to exhibit higher market valuations, attributing this to factors such as improved risk management, enhanced innovation, and better access to capital from socially responsible investors. While some research studies report neutral or even negative relationships, typically highlighting the exorbitant costs of single initiatives in particular settings, the positive result for the composite ESG score is especially revealing. It indicates that the market does not necessarily reward isolated efforts but instead prefers a balanced and integrated ESG approach. The possible adverse valuation effect of one aspect (e.g., high social-program expenses) can be more than outweighed by the favorable impact of others (e.g., risk mitigation through sound governance). Investors, huge institutional ones that use ESG scores as an initial screening tool, will want to reward the synergy that a high overall score signifies.

Finally, the constructive correlation between Tobin's Q and the ESG score can be read as the market approval of "future-proofing." As the world becomes increasingly complex, a high ESG score is no longer seen as mere corporate charity; it has become a shorthand for quality management and strategic vision. It signals that a company is actively addressing non-financial risks, such as climate-related regulatory changes, supply chain vulnerabilities, and shifting social expectations. Investors are willing to pay a premium for companies that demonstrate this level of resilience and forward-thinking leadership, as these qualities are believed to secure more sustainable cash flows in the future. This valuation premium is precisely what is captured by a higher Tobin's Q, reflecting the market's belief that a strong ESG posture is synonymous with a well-managed and durable enterprise.

Economic Performance of Sharia-Compliant Firms

The economic aspect does not represent a standalone pillar within the Environmental, Social, and Governance (ESG) framework. Although it is not treated as a distinct component, the economic dimension—often equated with financial performance and implied by the term "economic score"—is by no means disregarded. On the contrary, it is widely regarded as an outcome of robust environmental, social, and governance (ESG) practices. The underlying rationale is that firms excelling across the Environmental, Social, and Governance pillars are consequently expected to achieve more sustainable economic and financial performance over the long term.

In testing this relationship empirically, however, a notable finding of this study is the lack of a statistically significant relationship between the economic performance score and any of the firm performance metrics, including operational (ROA), financial

(ROE), and market-based (Tobin's Q) measures. This non-significant result does not necessarily imply that a firm's economic contributions are irrelevant. Instead, it suggests that the specific information captured by the GRI-based economic score may be redundant or already reflected in the conventional performance metrics themselves.

From a theoretical standpoint, this finding can be primarily interpreted through the information redundancy hypothesis. The dependent variables in this study—ROA, ROE, and Tobin's Q—are inherently direct measures of a firm's financial and economic success. The GRI economic dimension, which encompasses aspects such as economic value generated and distributed, market presence, and indirect economic impacts, is in many ways a narrative or supplementary account of the same underlying reality. In a statistical model, when the fundamental financial results are already identified, a disclosure-based score that conveys the same results is unlikely to provide incremental explanatory power, which leads to statistical insignificance.

The non-significant finding can also be understood through the concept of an "informational echo chamber." The economic health and impact of a company are powerfully communicated through its profit and loss statements, balance sheets, and stock price. The GRI economic score, while valuable for transparency and stakeholder communication, essentially reinforces the narrative already conveyed by these primary financial metrics. The statistical model, therefore, identifies the score as a redundant predictor. The conclusion is not that a firm's economic contributions are unimportant, but rather that their financial consequences are so fundamentally intertwined with core performance that a separate disclosure score does not provide additional, statistically significant insight in explaining that performance.

Environmental Performance of Sharia-Compliant Firms

Based on the test results, corporate environmental practices are found to have a significant negative impact on market-based measures (Tobin's Q). However, it does not have a significant impact on operational and financial performance metrics, including return on assets (ROA) and return on equity (ROE). This means that from an investor's point of view, the high costs of environmental activities are seen as a diversion of resources that do not contribute to short-term financial performance.

Our results align with a previous study by Li et al. (2024), who reported similar outcomes and argued that companies are affected by the high implementation costs of environmental programs, which are considered to reduce shareholder value. In contrast, our findings contradict those of Alareeni and Hamdan (2020), who identified a significant positive relationship between environmental performance and financial performance. However, the difference in results may be attributed to variation in sample characteristics or periods considered.

In general, our results suggests that environmental activities are perceived negatively in the market. This is because investors tend to focus on the short-term

costs of environmental programs while overlooking their potential long-term benefits, leading to lower company valuations.

Social Performance of Sharia-Compliant Firms

In social activities, this study found a significant negative relationship between a company's social performance score and its market value (Tobin's Q). The results indicate that the market reacts differently when companies that follow Shariah law are highly engaged in community activities. This finding contradicts the notion that some ethical investment theories suggest is typical, namely that the market integrates social and environmental concerns with financial goals rather than ignoring them. This finding also contradicts the concept behind Stakeholder Theory, which posits that meeting the needs of various stakeholders, such as employees, customers, and communities, should foster intangible assets like reputation and goodwill, ultimately increasing the company's value. However, this result aligns with the trade-off theory, which focuses on the needs of shareholders and views spending on social programs, such as community development projects or charitable donations, as a misuse of corporate resources.

The academic literature offers a divided perspective on this issue, providing important context for the present study's results. While a substantial body of research, particularly from developed economies, reports a positive link between social performance and market value (Buallay, 2019, 2020), citing benefits like enhanced brand loyalty and talent retention, other research studies support this study's adverse finding. Xu et al., (2025) argued that investors in certain markets remain skeptical of social initiatives, viewing them as "greenwashing" or simply as costs that erode profitability. The contrast between this study's findings and the more optimistic literature can be attributed to the unique characteristics of the Indonesian emerging market. Between 2015 and 2023, social activities were not perceived as significantly enhancing corporate reputations, as investors placed less emphasis on non-financial factors.

This finding illustrates a fundamental value divergence, wherein actions that generate social value do not simultaneously receive positive valuation from the market. Accordingly, capital allocated to social initiatives is not valued by investors as an investment in intangible assets. This market behavior suggests that, within a short-to medium-term framework, social expenditures are systematically treated as financial liabilities rather than as strategic, value-creating investments.

Governance Performance of Sharia-Compliant Firms

In the governance aspect, this study found a relationship between corporate governance and company performance. Effective governance scores positively affect operational performance (ROA) but adversely affect financial performance (ROE). These apparently contradictory results suggest that well-managed Sharia-compliant

companies may strategically prioritize long-term operational stability over short-term shareholder returns driven by leverage.

The positive relationship between governance and return on assets (ROA) is strongly supported by stakeholder theory. Good governance, with its emphasis on strong oversight, transparency, and risk management, ensures that the interests of all stakeholders are taken into account, leading to more efficient asset allocation, reduced operational waste, and a lower likelihood of fraud. As a result, well-managed companies operate with greater efficiency and stability, which has a direct impact on higher returns on assets.

Similar results were also reported by Alareeni & Hamdan (2020), who found that good governance enhances operational discipline and efficiency in asset management while limiting companies' engagement in high-risk financial strategies aimed at increasing short-term shareholder returns. This suggests a strategic imperative where long-term corporate stability is preferred over achieving short-term earnings. As such, this risk-averse approach generates mixed perceptions among different stakeholder groups: while it is highly regarded among stakeholders with a long-term horizon, such as creditors and employees, it will be perceived as underperforming by equity holders who focus primarily on short-term metrics, including return on equity (ROE).

CONCLUSION

This study addresses a significant gap in the ethical investment literature by evaluating the synergistic relationship between ESG factors and Sharia compliance in determining firm value within the Indonesian market. Focusing on panel data from 15 Sharia-compliant companies over the 2015–2023 period, this study analyzes the impact of distinct ESG disclosures on operational (ROA), financial (ROE), and market-based (Tobin's Q) performance. The findings reveal a nuanced picture where the overall ESG score is less impactful than its components. Specifically, governance factor has a significant influence on both operational and financial performance. Meanwhile, ESG, environment, and social factors show a substantial relationship with market performance.

From a practical standpoint, these results imply that Sharia-compliant companies can create greater value by strategically focusing on and reporting specific ESG dimensions that resonate with stakeholder expectations for both ethical and financial returns. Integrating sustainability reporting that emphasizes Islamic values can enhance transparency and attract the growing base of Muslim investors. Nevertheless, the study's conclusions should be interpreted in light of several limitations. First, the small sample size restricts the generalizability of the results. Second, the reliance on voluntary ESG data from the pre-regulation era introduces a potential selection bias. Finally, the specific timeframe of 2015-2023 may reflect

unique economic conditions that influenced the results. These limitations highlight opportunities for future research, including the following avenues:

1. Expand the sample size through cross-country comparative studies, incorporating data from other major Islamic finance markets, such as Malaysia and the GCC countries, to allow for more robust sector-specific analysis.
2. Conduct a post-regulation analysis to investigate how the mandatory ESG disclosure requirements in Indonesia have altered reporting behavior and its subsequent impact on firm value.
3. Explore investor behavior by examining how different investor groups (Muslim and conventional) perceive and respond to integrated ESG and Sharia-compliant corporate profiles and how these perceptions shape investment decisions.

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AUTHOR CONTRIBUTIONS

Lusiana Handayani	: research idea, analysis, and writing
Clarashinta Canggi	: method and analysis
Basyirah Ainun	: literature management and collecting data
Sahraman D. Hadjilatif	: discussion and conclusion

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