

The Impact of ESG Performance on Financial Performance in ASEAN Firms: The Moderating Role of Slack and Regulation

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Abstract

Research aims: this study examines the relationship between Environmental, Social, and Governance (ESG) performance and firm Financial performance in ASEAN countries, and investigates whether Financial slack and ESG regulatory compliance moderate this relationship. **Design/Methodology/approach:** a quantitative panel data approach is employed using 2.134 firm-year observations from listed firms across six ASEAN countries. ESG performance is measured using Bloomberg ESG scores. Financial slack is proxied by the current ratio, while ESG regulatory reporting regimens. Panel regression with an interaction term is applied to test moderating effects. **Findings:** ESG performance is positively associated with Financial performance. Financial slack weakens this relationship, where ESG regulatory compliance strengthens it. Indicating that ESG value creation is contingent in internal resource conditions and external institutional pressure. **Originality/value:** This study develops an integrated framework that jointly incorporates internal Financial constraints and external institutional enforcement to explain the conditional effectiveness of ESG performance in generating Financial value in ASEAN firms.

Introduction

Environmental, Social, and Governance (ESG) performance has emerged as a central construct in contemporary corporate sustainability and financial literature. The increasing urgency of climate change, social inequality, and governance failures has intensified global pressure on firms to integrate sustainability principles into strategic decision-making processes. ESG is no longer perceived as a voluntary disclosure mechanism but rather as a strategic framework that reflects how firms manage environmental responsibility, social impact, and governance quality in pursuit of long-term value creation (Ahmad et al., 2021; Al Amosh et al., 2023; Giannopoulos et al., 2022). From a theoretical perspective, ESG is strongly grounded in stakeholder theory, which emphasizes that firms are accountable not only to shareholders but also to a broader network of stakeholders, including employees, regulators, consumers, and society as a whole. Firms are expected to create balanced value across economic, social, and environmental dimensions (Ahmar et al., 2024; Yunus et al., 2024). In addition, legitimacy theory provides a complementary explanation, arguing that firms must continuously align their operations with evolving societal norms, institutional expectations, and regulatory frameworks to maintain legitimacy and long-term survival (Aris et al., 2021; Boulanouar et al., 2021; Tan, 2022). In this sense, ESG serves as both a stakeholder engagement mechanism and a tool for institutional legitimacy.

Empirical literature on ESG and financial performance remains inconclusive. While several studies find that ESG performance improves Financial outcomes through enhanced reputations, reduced risk exposure, and increased investor confidence, other studies report insignificant or mixed results, suggesting that ESG investment may generate higher implementation costs without immediate Financial returns (Disli et al., 2022; Garrido-Merchán et al., 2023). These mixed findings indicate that the ESG-financial performance relationship is context-dependent and may be influenced by moderating factors. Firms with strong ESG engagement are often perceived as more resilient, especially during periods of economic uncertainty, due to their ability to manage non-financial risk more effectively (Alsayegh et al., 2020; Birindelli et al., 2018; Jasni et al., 2020; Ye et al., 2023). ESG-oriented firms also tend to benefit from lower cost of capital and stronger stakeholder trust, which ultimately contributes to improved financial stability. Conversely, several studies report mixed or even insignificant relationships between ESG performance and financial outcomes. In certain industries, particularly those with low environmental sensitivity, ESG investments may generate high implementation costs without immediate financial returns, leading to efficiency trade-offs (Tabassam et al., 2021; Xie et al., 2019).

In certain industries, particularly those with low environmental sensitivity, ESG investment may generate high implementation costs without immediate financial return, leading to efficiency trade-offs (Ting et al., 2019). Other empirical findings suggest that ESG activities do not always translate into improved profitability or market valuation, indicating that the ESG-financial performance relationship is highly context-dependent (Cucari et al., 2018; Shakil et al., 2019; Singhania et al., 2024). These inconsistent findings suggest the existence of intervening and contextual factors that shape the outcomes of ESG implementation. Recent literature emphasizes the importance of moderating variables that influence how ESG performance translates into financial outcomes. However, prior studies often examine these moderating factors in isolation, focusing either on internal organizational conditions or external institutional pressure, without integrating both dimensions into a unified analytical framework.

One critical internal moderating factor is financial slack. Financial slack refers to excess financial resources available within a firm that can be deployed for strategic initiatives without disrupting core operations (Aulia et al., 2024; Gutiérrez-Ponce et al., 2024; Velte, 2020; Z. Wu et al., 2024). It reflects a firm's liquidity capacity and financial flexibility, often measured using indicators such as the current ratio. From a resource-based view, financial slack serves as a strategic resource that enables firms to invest in innovation, sustainability initiatives, and long-term value creation. In the context of ESG, financial slack plays a dual role. On one hand, it enables firms to invest in environmental technologies, social welfare programs, and governance improvements, even when short-term financial returns are uncertain. On the other hand, excessive slack may also lead to inefficiency or managerial opportunism if not properly controlled (Zhang et al., 2024). Therefore, the role of financial slack in the ESG-financial performance relationship remains ambiguous and requires further empirical investigation (Clarkson et al., 2011; Sunbin Yoo et al., 2021).

In addition to internal financial conditions, external institutional pressures also play a crucial role in shaping ESG effectiveness. Institutional theory suggests that firms operate within a regulatory environment that imposes formal and informal constraints on organizational behavior. ESG regulation, in particular, varies significantly across countries, ranging from voluntary disclosure frameworks to mandatory reporting requirements. In this study, ESG regulation is operationalized as a country-level dummy variable in this study. Stricter ESG regulation enhances transparency, reduces information asymmetry, and improves the credibility of corporate sustainability disclosure. ESG regulatory compliance acts as an external institutional mechanism that shapes corporate behavior through regulatory pressure. ESG regulatory compliance mitigates the risk of symbolic ESG practices such as greenwashing, ensuring that ESG performance reflects substantive organizational behavior rather than mere impression management (Shahrin et al., 2023; Suretno et al., 2022; F. Wang et al., 2022). Empirical evidence indicates that strong regulatory environments positively influence corporate environmental responsibility and financial performance by increasing accountability and investor trust (Handoyo et al., 2024).

From a legitimacy theory perspective, regulatory pressure forces align with societal expectations, thereby enhancing their legitimacy in the eyes of stakeholders. Firms operating under mandatory ESG regimes are more likely to integrate sustainability into core strategies, which can strengthen the ESG-financial performance relationship (Kaakeh et al., 2022; S.-P. Lee et al., 2023). This ESG regulatory acts as an external institutional mechanism that reinforces the effectiveness of ESG implementation. Despite growing academic attention, three major research gaps remain. First, most prior studies focus on single-country settings, limiting the generalizability of findings across different institutional environments. Second, existing literature rarely integrates both internal financial conditions and external regulatory environments within a single model, particularly in emerging markets, and remains underexplored in explaining ESG effectiveness. Third, empirical evidence from ASEAN countries remains limited despite their diverse ESG regulatory frameworks.

To address these gaps, this study examines the impact of ESG performance on firm Financial performance in ASEAN countries, with Financial slack and ESG regulatory compliance as moderating variables. ESG performance is measured using the Bloomberg ESG score, while financial performance is proxied by Return on Assets (ROA). The study uses panel data from listed firms across Indonesia, Malaysia, Singapore, Thailand, Vietnam, and the Philippines during 2020–2024. Panel regression with an interaction effect is applied to test the hypotheses. In this context, the study addresses the following research question:

RQ1: How does ESG performance affect firm financial performance?

RQ2: Does financial slack strengthen or weaken the relationship between ESG performance and financial performance?

RQ3: Does ESG regulatory compliance strengthen the relationship between ESG performance and financial performance?

The Remainder of this article is structured as follows. The next section reviews the relevant literature and develops the research hypotheses. This is followed by the methodology section, which outlines the data and empirical model. The subsequent section presents and discusses the empirical results. The final section concludes the study and provides implications and direction for future research.

Literature review

Environmental, Social, and Governance (ESG)

Environmental, Social, and Governance (ESG) performance represents a comprehensive framework for evaluating corporate sustainability and ethical impact (Ningtyas, 2024; Octavio et al., 2025). It encompasses three key dimensions: environmental responsibility, social engagement, and governance quality, which collectively reflect how firms manage non-financial risk opportunities (Pinheiro et al., 2024; Rassiah et al., 2024; Saygili et al., 2022). A growing body of literature suggests that strong ESG performance is associated with improved financial outcomes. Firms with high ESG ratings tend to benefit from enhanced operational efficiency, better risk management, and increased investor confidence (Shin et al., 2023; Tian et al., 2025; Yorke et al., 2023). ESG-oriented firms are also more resilient to market shocks, as they are better equipped to manage environmental and social risk while maintaining strong governance structures (Rumefi et al., 2024).

From an environmental perspective, effective management of emissions, waste, and resource use enhances corporate reputation and reduces regulatory risk (Zahroh et al., 2021). Social performance strengthens relationships with stakeholders, including employees, customers, and communities, which contributes to long-term organisational stability (De Silva Lokuwaduge et al., 2020). Meanwhile, governance quality ensures transparency, accountability, and ethical decision-making, all of which are essential for sustaining investor trust and corporate credibility (Aslam et al., 2021; Cortez et al., 2022). Furthermore, ESG disclosure plays a critical role in signalling corporate commitments to sustainability. Transparent reporting reduces information asymmetry and attracts sustainability-oriented investors, thereby improving market valuation and access to capital (Delmas et al., 2004; Landi et al., 2019; Sangok Yoo et al., 2022).

Financial Performance

Financial performance refers to the overall reflection of a company's ability to create economic value through the effective and efficient management of its resources over a certain period (Delmas et al., 2004; Landi et al., 2019; Sangok Yoo et al., 2022). It represents the extent to which an organization can achieve its financial objectives, sustain profitability, and maintain long-term financial stability within a competitive business environment. In a broader perspective, financial performance is not only understood as short-term profitability, but also the company's capability to sustain growth, maintain operational efficiency, and generate consistent returns for stakeholders. It reflects managerial effectiveness in allocating resources, controlling cost, and optimizing business operations to enhance firm value (Shahzad et al., 2020; Shin et al., 2023). Financial performance is also closely linked to the firm's strategic decisions and external business environment. Internal managerial practices, capital structure decisions, and resource allocation strategies significantly shape financial outcomes, while external factors such as economic conditions, industry competition, and regulatory pressures also influence financial stability and growth potential (Broadstock et al., 2021; Khan et al., 2021; Zahid et al., 2022).

In contemporary studies, financial performance is increasingly viewed through a sustainability-oriented lens, where non-financial dimensions such as environmental, social, and governance practices are considered important determinants of long-term financial outcomes. Firms that can integrate sustainable practices into their operations tend to achieve stronger stakeholder confidence, improved reputation, and more stable financial performance over time (Yingzhao et al., 2024; Zhou et al., 2022).

Financial Slack

Financial slack refers to the availability of excess financial resources within a firm that exceed its immediate operational and financial obligations (Atan et al., 2018; Singhania et al., 2023; Tista et al., 2021). These resources typically include cash holdings, liquid assets, and unused debt capacity that can be mobilized to support strategic initiatives or absorb environmental uncertainties. From a strategic management perspective, financial slack plays a critical role in enhancing organizational flexibility and resilience. It allows firms to respond more effectively to unexpected shocks, economic downturns, and competitive pressure by providing a financial buffer that reduce dependency on external financing (Ali Imran et al., 2020; Gregory, 2024). Firms with higher levels of financial slack are generally more capable of sustaining operations during crises and maintaining investment activities even under constrained conditions (Bensouda et al., 2022; Khan et al., 2021).

His flexibility enhances not only operational performance but also long-term competitiveness. In addition, financial slack serves as an important risk management tool. It enables firms to mitigate liquidity risk, reduce financial distress profitability, and stabilize earnings volatility (Kim et al., 2021; Shahzad et al., 2020; Signori et al., 2021). During periods of economic uncertainty, such as financial crises or global disruption, firms with stronger financial slack demonstrate higher resilience and adaptability compared to financial constrained firms (Zahid et al., 2022).

ESG Regulatory Compliance

ESG regulatory compliance refers to the extent to which forms adhere to laws, regulations, and standards governing environmental, social, and governance practices. These regulations are designed to ensure that firms operate not only with a focus on financial performance but also with consideration for social responsibility and environmental sustainability (Alareeni et al., 2020; Usman et al., 2025; Yunus et al., 2024; Zeng et al., 2023). Increasing global emphasis on sustainable finance has led to the expansion of ESG-related regulations, making compliance a key determinant of corporate transparency, accountability, and legitimacy (Chen et al., 2022; Zhao et al., 2018). In Southeast Asia, ESG regulatory frameworks exhibit varying degrees of maturity, ranging from mandatory to voluntary regimes, which influence the level of ESG adoption and disclosure across firms. In Indonesia, ESG reporting was initially voluntary but became mandatory following the issuance of OJK regulation No., 51/POJK.03/2017, effective from 2019. This regulation requires financial institutions and listed companies to prepare sustainability reports outlining their environmental, social, and governance impact. The introduction of ESOJK No. 16/2021 further strengthened disclosure requirements by providing more detailed guidance and encouraging alignment with international standards such as the Global Reporting Initiative (GRI) (Aris et al., 2021).

In Singapore, ESG reporting is among the most advanced in the region. The Singapore Exchanges (SGX) introduced mandatory sustainability reporting in 2016 through Listing Rule 7111A, requiring listed companies to disclose ESG-related policies, risk, and performance (Aulia et al., 2023). The framework was further enhanced in 2021 with stronger alignments to international standards such as the Task Force on Climate-related Financial Disclosures (TCFD). This regulatory environment positions Singapore as a regional leader in ESG transparency and accountability. In Malaysia, ESG disclosure transitioned from voluntary to mandatory through amendments to Bursa Malaysia's Main Market listing Requirements in 2018 (paragraphs 9.25 and 9.26). These regulations require listed firms to publish sustainability statements addressing material ESG issues. Subsequent enhancements in 2022 strengthened reporting obligations, effective from 2023, emphasizing governance structure, materiality assessment, and data reliability. This progression demonstrates Malaysia's commitment to embedding sustainability into corporate reporting practices.

In the Philippines, ESG reporting became mandatory with the issuance of Securities and Exchange Commission (SEC) Memorandum Circular No. 4, Series of 2019. This regulation requires publicly listed companies to submit a sustainability report as part of their annual disclosure, covering ESG risk, policies, and performance. Firms are encouraged to adopt international standards such as GRI and Integrated Reporting (IR), reinforcing comparability and transparency. In Thailand, ESG disclosure requirements were formalized in 2019 when the Securities and Exchange Commission (SEC) mandated listed firms to produce sustainability reports (Atan et al., 2018; Shobhwani et al., 2023). These reports must includes bot financial and non-financial performance, particularly ESG-related risk and opportunities. This regulatory framework reflects Thailand's transition from voluntary to mandatory ESG reporting, strengthening corporate accountability and investor confidence.

In contrast, Vietnam represents a developing regulatory environment where sustainability disclosure is partially mandated. Circular No.155.2015/TT-BTC requires listed firms to disclose environmental and social information within annual reports, primarily reflecting a Corporate Social Responsibility (CSR) approach (Zhong et al., 2022).

Stakeholder Theory

This study develops a theoretical framework based on stakeholder theory, originally introduced by R. Edward Freeman, to explain how firms create value through the integration of Environmental, Social, and Governance (ESG) practices. Stakeholder theory emphasises that companies have responsibilities not only to shareholders but also to a broader group of stakeholders who can be affected by corporate activities (Birindelli et al., 2018; Cucari et al., 2018; Ye et al., 2023; Zhong et al., 2022). As a conceptual framework, stakeholder theory highlights that organisational success is not solely determined by financial performance, but also by its impact on all stakeholders (Boulanouar et al., 2021). In this context, ESG performance reflects a firm's responsibility to balance economic, social, and environmental objectives. Firms are expected to manage environmental risk, maintain social relationships, and ensure good governance through transparency and accountability (Boulanouar et al., 2021; Garrido-Merchán et al., 2023). Furthermore, effective ESG implementation strengthens stakeholder relationships, enhances corporate reputation, and improves long-term financial performance. Firms with strong capacity and environmental awareness tend to disclose ESG information more transparently, which builds trust among investors and consumers (Tabassam et al., 2021). Prior studies also confirm that ESG performance contributes positively to financial outcomes by reducing risk and attracting socially responsible investment (Shakil et al., 2019; Xie et al., 2019).

Legitimacy Theory

Legitimacy theory, initially introduced by John W. Meker and Brian Rowan (1997), posits that organisations operate within a broader institutional environment shaped by regulations, norms, and societal values (Eliwa et al., 2021; Saygili et al., 2022). Firms are therefore required to align their operation with these expectations to maintain legitimacy and ensure long-term survival (Zumente et al., 2021). In this context, legitimacy reflects the extent to which corporate actions are perceived as appropriate within socially constructed systems of norms and beliefs (Xiao et al., 2022). From an ESG perspective, legitimacy theory suggests that firms adopt sustainability practices not only for economic benefits but also to conform to institutional pressures. Regulatory frameworks, particularly ESG-related regulations, play a crucial role in shaping corporate behavior by encouraging transparency, accountability, and compliance (Ahmar et al., 2024; Zhu et al., 2023). Firms that comply with ESG regulations tend to reduce information asymmetry, mitigate reputational risk, and strengthen stakeholder trust, which ultimately contributes to improved financial performance (Uyar et al., 2023). Moreover, strong regulatory environments discourage symbolic ESG practices such as greenwashing and encourage substantive sustainability engagement. Companies operating under stricter ESG regulations are more likely to integrate sustainability into their core strategy, thereby reinforcing the relationship between ESG performance and financial outcomes (Baucal et al., 2023; Shin et al., 2023).

Environmental, Social, and Governance Performance-Financial Performance

In recent years, the implementation of Environmental, Social, and Governance (ESG) practices has gained increasing attention as an important aspect of corporate strategy. Growing awareness of sustainability issues encourages companies not only to pursue economic profitability but also to consider the environmental and social impacts of their business activities while maintaining sound corporate governance. In many countries with rapidly growing economies, firms face significant social and environmental challenges, such as pollution, labor exploitation, and governance practices, which may threaten corporate reputation and long-term operational sustainability (Sumarta et al., 2023). Firms that effectively manage relationships with these stakeholders through strong ESG practices are more likely to receive broader external support. Such support may be reflected in increased customer loyalty, higher employee satisfaction, and stronger relationships with communities, which ultimately contribute to improved corporate financial performance (Al Amosh et al., 2023; Brogi et al., 2019).

Previous empirical studies have documented a positive association between ESG performance and corporate financial performance. Companies with higher ESG performance tend to demonstrate greater financial stability and moderate sustainable business growth (Octavio et al., 2025; Yuliana et al., 2023; Zahid et al., 2023). In particular, the environmental dimension of ESG can enhance financial performance through improved resource efficiency and reduced operational costs in the long term. Firms that implement responsible environmental practices, such as efficient energy management and sustainable resource utilization, may increase operational efficiency and productivity (Fuadah et al., 2022; Ioannou et al., 2023). The social dimension of ESG also plays a significant role in improving corporate financial performance. Companies actively involved in social initiatives often gain a better reputation among consumers and the broader public. A positive corporate reputation can enhance customer trust and loyalty, which may strengthen market position and improve financial outcomes (Alsayegh et al., 2020; Ting et al., 2019). The governance dimension contributes to improved financial performance by strengthening transparency, accountability, and effective decision-making within the organization. Strong governance mechanisms enable firms to manage risk more effectively and enhance operational efficiency, ultimately supporting better financial performance (Disli et al., 2022). Based on these various explanations, the formulation of the hypothesis that can be built is:

H1: Environmental, Social, and Governance (ESG) performance positively affects corporate financial performance

Financial Slack as a Moderating Variable

Previous studies suggest that financial slack can strengthen the relationship between ESG performance and corporate financial performance. Financial slack provides firms with greater financial flexibility, enabling them to allocate sufficient resources to support ESG initiatives without immediately compromising financial performance. According to Alsayegh et al. (2020) companies with higher levels of financial slack are better able to invest in sustainability initiatives because they possess additional resources that can be used to absorb the cost associated with ESG implementation. In addition, financial slack may also help firms cope with uncertainty related to sustainability investments and financial performance (Aulia et al., 2024; Singhania et al., 2024). The implementation of ESG practices, such as environmentally friendly technologies, carbon emission reduction, and the use of renewable energy, often requires substantial initial investment (Tan, 2022). Firms with sufficient financial slack are better positioned to support these investments and sustain ESG initiatives in both the short and long term. Financial slack may enhance the positive impact of ESG performance on corporate financial performance by providing the financial capacity need to implement sustainability effectively (Famiyeh et al., 2018; Sharma et al., 2022).

From the perspective of stakeholder theory, companies are expected to address the needs and expectations of various stakeholders, including investors and communities. A firm with adequate financial slack can allocate resources to support employee welfare programs and other ESG-related initiatives, demonstrating its commitment to stakeholder interests. Such actions may enhance employee satisfaction, strengthen corporate reputation, and improve relations with stakeholders, which ultimately contribute to better financial performance (Danso et al., 2019; Kaakeh et al., 2022). In addition, financial slack may also support governance-related initiatives by ensuring smoother operational processes and effective implementation of corporate governance mechanisms (Sultana et al., 2018). Strong governance practices supported by sufficient financial resources can enhance corporate reputation and increase stakeholder confidence in the firm (S. Chen et al., 2023). By maintaining adequate financial slack, firms are better equipped to respond to stakeholder expectations and regulatory requirements, thereby strengthening the effectiveness of ESG implementation and improving financial outcomes (Gholami et al., 2022; Sklavos et al., 2024). Based on these various explanations, the formulation of the hypothesis that can be built is:

ESG Regulatory compliance as a moderating variable

ESG regulatory compliance has become a growing concern globally due to its influence on how companies implement sustainable business practices. Strong ESG performance, which encompasses, can enhance responsibility, social accountability, and effective corporate governance, can enhance corporate reputation, attract investors, and ultimately contribute to improved financial performance. Increasing demands for transparency and accountability from stakeholders further reinforce the importance of ESG implementation within corporate operations (S.-P. Lee et al., 2023). Conversely, in countries where ESG regulations are less stringent, such as Indonesia, Malaysia, the Philippines, Vietnam, and Thailand, many firms have begun voluntarily adopting ESG practices despite the absence of strict regulatory requirements. This trend indicates that companies increasingly recognize the strategic value of sustainability practices in improving their financial outcomes. However, the absence of strong regulatory pressure may lead to variations in how effectively ESG practices translate into financial performance. Effective regulatory frameworks not only encourage compliance with legal standards but also help firms manage risk, improve operational efficiency, and create long-term value (Al Amosh et al., 2023; Duque-Grisales et al., 2021; Giannopoulos et al., 2022). By complying with ESG regulations, companies can reduce potential costs associated with litigation, penalties, or reputational damage, while simultaneously improving productivity and employee loyalty through sustainability-oriented initiatives (Lavin et al., 2022; Sun et al., 2022). As a result, ESG regulatory compliance may strengthen the relationship between ESG performance and corporate financial performance. Empirical studies support this argument. Santos et al. (2024) found that firms operating within stronger regulatory environments tend to experience better financial outcomes from ESG initiatives.

Similarly, Suttipun et al. (2022) reported that advanced regulatory frameworks facilitate stronger ESG integration and lead to superior financial performance. In contrast, firms operating in weaker regulatory environments may face challenges in implementing ESG practices effectively (L. Chen et al., 2023). Furthermore, DasGupta (2022) demonstrated that stricter regulatory oversight enhances the positive effect of ESG disclosure on financial performance. These findings are consistent with legitimacy theory, which suggests that corporate behavior is shaped by the regulatory and institutional environment in which firms operate. Strong regulatory frameworks encourage firms to align their ESG practices with societal expectations, thereby enhancing corporate legitimacy and improving financial outcomes. Based on the above arguments, the following hypothesis is proposed:

H3: ESG regulatory compliance strengthens the positive relationship between ESG performance and corporate financial performance

Based on the theoretical arguments and hypotheses developed above, this study proposes a conceptual framework illustrating the relationship among ESG performance, corporate Financial performance, Financial slack, and ESG regulatory compliance. Specifically, the diagram depicts the direct effect of ESG performance on corporate Financial performance, as well as the moderating roles of Financial slack and ESG regulatory compliance in strengthening this relationship. The proposed research framework is presented in Fig. 1.

Source: Author's elaboration

Research Methods

Sample

The sample of this study consists of non-financial companies listed on stock exchanges in six Southeast Asian countries, namely Indonesia, Malaysia, Singapore, Thailand, Vietnam, and the Philippines, during the period 2020–2024. These countries were selected because they represent emerging markets in the ASEAN region that have increasingly adopted Environmental, Social, and Governance (ESG) practices and sustainability reporting initiatives. Financial sector firms were excluded from the sample due to their distinct regulatory frameworks and financial structures compared to other industries. Furthermore, firms in non-financial sectors generally have greater environmental and social impact, making them more relevant for ESG-related studies.

The sample was selected using purposive sampling criteria first; companies must publish annual financial reports consistently during the observation period. Second, firms must have available ESG score data in the Bloomberg database. Third, companies with incomplete financial data were excluded from the sample. After applying these criteria, removing outliers identified through statistical screening, the final sample consists of 2,123 firm-year observations across the six ASEAN countries.

Definitions of variables

Independent Variable

The independent variable in this study is ESG performance. ESG performance is measured using the ESG disclosure score obtained from the Bloomberg database. The ESG score reflects the level of transparency and disclosure related to environmental, Social, and Governance practices of companies. The ESG score ranges from 0 to 100, where a higher score indicates better ESG performance and more comprehensive sustainability disclosure. The use of ESG scores as a proxy for sustainability performance is consistent with prior studies examining the relationship between ESG practices and corporate performance. Data for the score are obtained from publicly available information, and the ESG score is consistent with prior literature (Albitar et al., 2020; N. Wang et al., 2022).

Dependent Variable

The dependent variable in this study is corporate financial performance. Financial performance is measured using Return on Assets (ROA), which represents the company's ability to generate profit from its total assets. ROA is calculated as follows :

$$ROA = \frac{\text{Laba Bersih/Rugi}}{\text{Total Aset}}$$

ROA is widely used in prior studies examining the relationship between ESG performance and financial performance because it reflects operational efficiency in generating profits (Veenstra et al., 2020; Zahid et al., 2023).

Moderating Variable

This study employs two moderating variables: financial slack and ESG regulatory compliance. Financial slack represents the availability of excess financial resources that allow firms to invest in strategic initiatives such as sustainability activities. Financial slack is measured using the current ratio, which reflects the firm's liquidity and financial flexibility (Arayssi et al., 2020; S. Wu et al., 2022).

$$\text{Rasio Financial Slack} = \frac{\text{Aset Lancar}}{\text{Kewajiban Lancar}}$$

Firms with higher financial slack have greater flexibility to invest in ESG initiatives without negatively affecting short-term financial performance. The second moderating variable is ESG regulatory compliance. This variable reflects the regulatory environment in which firms operate with respect to ESG disclosure requirements. Following prior cross-country ESG studies, ESG regulatory compliance is measured using a dummy variable representing whether ESG reporting is mandatory in the country where the firm operates (Latip et al., 2022). Firms operating in countries with mandatory ESG disclosure regulations are coded as 1, while firms in countries where ESG disclosure remains voluntary are coded as 0.

Control Variable

Several control variables are included in the regression model to reduce potential bias and isolate the effect of ESG performance on corporate financial performance. Firm size (SIZE) is measured as the natural logarithm of total assets. Large firms tend to have freer access to resources, higher visibility, and stronger incentives to implement ESG practices and disclose sustainability information (Sunarto et al., 2021). Firm growth (Growth) is measured using annual sales growth, which reflects the firm's expansion opportunities and market dynamics that may influence financial performance (Adu et al., 2023; Heras-Saizarbitoria et al., 2020; Ningtyas, 2024). In addition to firm-level variables, this study incorporates several country-level institutional variables obtained from the World Bank governance indicators. These include gross domestic product growth (GDP), Voice and accountability (VOICE), governance effectiveness (GOV). GDP growth represents the macroeconomic conditions of a country that may influence corporate performance.

Voice and accountability reflect the extent to which citizens can participate in selecting their governance and enjoy freedom of expression and association. Government effectiveness captures perceptions of the quality of public services, the quality of policy formulation, and the credibility of the government's commitment to policies. Regulatory quality measures the ability of governments to formulate and implement sound policies and regulations that support private sector development (Sunarto et al., 2021). These country-level variables are included to control for institutional and macroeconomic differences across countries that may influence both ESG practices and corporate financial performance. The operational definitions, abbreviations, and measurements of all research variables used in this study are summarized in Table 1.

Table 1
Operating Definitions and Measurement of Variables

Variable	Abbreviation	Measurement
ESG Performance	ESG	ESG Combined Score From Bloomberg ESG Database
Financial Performance	ROA	Net income divided by total assets
Financial Slack	FS	Cash and cash equivalents plus available financial facilities divided by total debt
ESG Regulation Compliance	R	Dummy variable: firms operating in countries with ESG reporting regulations = 1; otherwise = 0
Firm Size	SIZE	Natural logarithm of total assets
Firm Growth	GROWTH	(revenue _t – revenue _{t-1}) / revenue _{t-1} * 100%
Gross Domestic Product Growth	lnGDP	Annual real GDP growth rate (%)
Voice and Accountability	VOICE	Governance indicator ranging from – 2.5 to + 2.5, measuring citizen participation and freedom of expression
Regulatory Quality	REG	Governance indicator ranging from – 2.5 to + 2.5, measuring the government's ability to formulate sound regulations
Government effectiveness	GOV	Governance indicator ranging from – 2.5 to + 2.5, measuring the quality of public services and public implementation
Source (s): Author's elaboration (2025)		

Model design

To examine the relationship between ESG performance and corporate financial performance as well as the moderating effect of financial slack and ESG regulatory compliance, the following regression model is estimated:

Model 1 Baseline

Direct effects regression equation

$$FP_{it} = \alpha_1 + \beta_1 ESG_{it} + \beta_2 Size + \beta_3 Growth_{it} + \beta_4 lnGDP_{it} + \beta_5 Voice_{it} + \beta_6 Reg_{it} + \beta_7 Gove_{it} + \epsilon_{1it}$$

Model 2: Financial Slack Moderation

$$FP_{it} = \alpha_2 + \beta_8 ESG_{it} + \beta_9 FS_{it} + \beta_{10} R_{it} + \beta_{11} Size_{it} + \beta_{12} Growth_{it} + \beta_{13} lnGDP_{it} + \beta_{14} Voice_{it} + \beta_{15} Reg_{it} + \beta_{16} Gove_{it} + \epsilon_{1it}$$

Model 3 ESG Regulation Compliance moderation

$$FP_{it} = \alpha_3 + \beta_{17} ESG_{it} + \beta_{18} FS_{it} + \beta_{19} R_{it} + \beta_{20} (ESG_{it} * FS_{it}) + \beta_{21} (ESG_{it} * R_{it}) + \beta_{22} Size_{it} + \beta_{23} Growth_{it} + \beta_{24} lnGDP_{it} + \beta_{25} Voice_{it} + \beta_{26} Gov_{it} + \beta_{27} Reg_{it} + \epsilon_{1it}$$

Where:

FP = Financial Performance (ROA)

ESG = ESG performance score from Bloomberg

FS = Financial slack measured by the current ratio

REG = ESG regulatory compliance

SIZE = Firm size measured as the natural logarithm of total assets

GROW = Sales Growth

lnGDP = GDP growth

VOICE = Voice and accountability index

REGQ = Regulatory quality index

GOV = Government effectiveness index

Results

Descriptive Analysis

Descriptive analysis provides an overview of the data by presenting the mean, minimum, maximum, and standard deviation values, as shown in Table 2. This analysis offers important insights into the distribution, variability, and overall characteristics of the variables used in the study, including financial performance, ESG performance, financial slack, and control variables. From the financial performance perspective, the results indicate substantial variability across firms. Return on Assets (ROA) shows a mean value of 4.541, with a minimum of 0.010 and a maximum of 83.970, accompanied by a relatively high standard deviation of 8.607. This suggests that firms differ significantly in their ability to generate profit from their assets. Similarly, Return on Equity (ROE) has a mean of 3.570, ranging from 0.068 to 50.900, with a standard deviation of 5.077, indicating variations in a firm's effectiveness in generating returns for shareholders. Tobin's Q presents a mean value of 1.203, with a wide range between 0.020 and 42.560, reflecting differences in market valuation and growth expectations among firms.

Table 2
Descriptive Statistic

Descriptive Statistics					
	Mean	Minimum	Maximum	Std. Deviation	Obs
ROA	4.541	0.010	83.97	8.607	2.134
ROE	3.570	0.068	50.90	5.077	2.134
TobinsQ	1.203	0.020	42.56	2.351	2.134
ESG	49.238	6.870	83.23	11.795	2.134
FS	2.660	0.013	199.06	4.750	2.134
Size	14.196	6.355	18.43	1.689	2.134
Geowth	0.103	-0.990	18.44	0.414	2.134
lnGDP	26.936	26.550	27.81	0.451	2.134
Voice	- 0.177	-0.840	0.16	0.790	2.134
Gov	0.412	0.050	1.03	0.330	2.134
Reg	0.666	-0.010	2.320	0.351	2.134
Valid N (listwise)					2.134
Source (s): created by authors (2025)					

Regarding sustainability performance, the ESG score shows a mean of 49.238, with a minimum value of 6.870 and a maximum of 83.230. The relatively high standard deviation of 11.795 indicates considerable variation in how firms implement environmental, social, and governance practices. This suggests that while some firms have advanced ESG practices, others are still at an early stage of implementation. Financial Slack also exhibits a high degree of dispersion, with a mean value of 2.660, ranging from 0.013 to 199.060, and a standard deviation of 4.750. This indicates that firms differ substantially in their internal financial flexibility, where some firms possess limited liquidity while others maintain substantial financial reserves that may support strategic investments and risk management. Control variables further provide insights into firm-specific and macroeconomic conditions. Firm size has a mean of 15.196 with relatively low variation, suggesting a more stable distribution among sample firms. Growth shows a mean of 0.103, with a wide range from - 0.990 to 18.440, indicating differing growth dynamics across firms. External factors such as lnGDP exhibit minimal variation, reflecting relatively stable macroeconomic conditions across countries. Meanwhile, institutional variables such as voice, Government Effectiveness (Gov), and Regulator Quality (Reg) display moderate variations, indicating differences in governance environments across countries.

In addition, the categorical variables of ESG regulatory compliance are presented through frequency distribution. The results show that 84.49% of the observations belong to firms that disclose sustainability report and are listed on the stock exchange, while 15.51% do not. This indicates that the majority of firms operate within regulatory environments that encourage or mandate ESG disclosure.

Correlation Matrix

A pairwise correlation analysis was conducted to examine the relationship among the research variables and to assess the potential presence of multicollinearity. Following the guideline suggested by S. Chen et al. (2023), multicollinearity may be indicated when the correlation coefficient exceeds 0.90. As reported in Table 3, none of the correlation coefficients exceed this threshold, suggesting that multicollinearity is unlikely to pose a serious concern in this study. The correlation results indicate that the three financial performance indicators ROA, ROE dan Tobin Q are positively and significantly associated with each other.

Table 3
Correlation matrix

ROA	ROA	ROE	TobinsQ	ESG	FS	Size	Growth	lnGD	Voice	Gov	Reg
	1.000										
ROE	0.382**	1.000									
TobinsQ	0.208**	0.291**	1.000								
ESG	0.038	0.040	-0.008	1.000							
FS	0.021	-0.004	-0.010	0.021	1.000						
Size	0.054*	-0.036	-0.020	0.275**	-0.077**	1.000					
Geowth	0.206**	0.101**	0.033	0.025	-0.025	0.077**	1.000				
lnGDP	0.055	0.025	0.033	-0.137**	-0.049	-0.136**	0.048	1.000			
Voice	-0.007	-0.016	-0.004	-0.159**	0.031	0.047	0.098**	0.030	1.000		
Gov	0.071*	0.042	0.075**	-0.015	0.099**	-0.205**	0.243**	0.114**	0.438**	1.000	
Reg	-0.062**	-0.027	-0.061**	-0.020	0.103**	0.166**	-0.008	-0.416**	0.160**	-0.008	1.000
* = Signifikan pada 10% ($p < 0.10$)											
** = Signifikan pada 5% ($p < 0.05$)											
*** = Signifikan pada 1% ($p < 0.01$)											
Source (s): created by authors 2025											

ROA is positively correlated with ROE and Tobin Q, while ROE also demonstrates a positive relationship with Tobin Q. These findings suggest that although the three indicators capture different aspects of firm performance, they consistently reflect a firm's profitability and market valuation. Regarding sustainability performance, ESG exhibits relatively weak and statistically insignificant correlations with financial performance indicators. The correlation coefficients between ESG and ROA, ROE, and Tobin Q are relatively small, suggesting that the relationship between ESG performance and financial performance may not be clearly observable through simple bivariate analysis.

Among the firm-level variables, firm size shows a positive and significant correlation with ESG performance, indicating that larger firms tend to engage more actively in sustainability-related practices. At the institutional level, governance-related variables such as voice and accountability, governance effectiveness, and regulatory quality show varying degrees of correlation with firm level variables, reflecting differences in institutional environments across countries. Furthermore, the dummy variable representing ESG regulatory compliance shows a positive and significant correlation with ESG performance ($r = 0.132$, $p < 0.01$), indicating that firms operating in regulatory environments that encourage ESG disclosure tend to exhibit higher sustainability performance.

Regression analysis and discussion

Table 4 presents the estimation results for the three regression models employed in this study. This approach is consistent with prior panel data studies examining the relationships between ESG and firm performance. The explanatory power of the baseline model (Model 1) indicates a moderate level of variation explained in financial performance. Although the R^2 value appears modest, this is consistent with prior studies in ESG and corporate finance, where financial performance is influenced by multiple firm-specific and macroeconomic factors (Cucari et al., 2018; Jasni et al., 2020; Tabassam et al., 2021). The regression result from Model 1 reveals that ESG performance has a positive and statistically significant effect on financial performance (ROA), with a coefficient of 0.041 at the 10% significance level. Accordingly, H1 is supported.

Table 4
Multivariate Regression Analysis

Keterangan	Mode 1	Model 2	Model 3
Constant	0.479 (0.990)	-0.827 (0.976)	-0.466 (0.101)
ESG	0.041* (0.088)	0.041 (0.101)	0.080 (0.069)
FS		0.029 (0.582)	0.681** (0.026)
R		0.199 (0.769)	-8.343*** 0.000
ESG*FS			-0.015** (0.019)
ESG*R			0.176*** (0.000)
Size	-0.312** (0.012)	-0.304** (0.025)	-0.207** (0.027)
Growth	4.234*** (0.000)	4.229*** (0.000)	4.234*** (0.000)
lnGDP	0.255 (0.696)	0.289 (0.670)	0.450 (0.528)
Voice	0.113 (0.887)	-0.049 (0.978)	-0.485 (0.622)
Gov	0.095 (0.901)	0.088 (0.897)	-0.355 (0.948)
Reg	-0.649** (0.043)	-0.651 (0.054)	-0.802** (0.023)
R	0.230	0.231	0.237
F	12.736	9.946	9.299
N	2134	2134	2134
* = Signifikan pada 10% ($p < 0.10$) ** = Signifikan pada 5% ($p < 0.05$) *** = Signifikan pada 1% ($p < 0.01$)			

Source (s)

created by authors 2025

Table 4 further reports the estimations results of Model 2 and Model 3, which include Financial Slack (FS), ESG regulatory (R), and the interaction terms. This result is consistent with prior empirical findings suggesting that ESG practices enhance operational efficiency, reduce risk, and strengthen stakeholder trust (Saygili et al., 2022; Shin et al., 2023; Tian et al., 2025). From a theoretical perspective, this finding aligns with stakeholder theory, which posits that firms addressing stakeholder interests are more likely to achieve superior performance (Cucari et al., 2018; Jasni et al., 2020; Tabassam et al., 2021). ESG implementation reflects a firm's ability to create long-term value through sustainability and responsible business practices. Table 4 further presents the result of Model 2, which incorporates Financial Slack (FS) and ESG regulatory compliance (R).

In Model 2, FS and R are included as independent variables to examine their direct effects. The results indicate that neither variable has a statistically significant direct impact on financial performance, suggesting that resource availability and regulatory compliance alone are insufficient to influence firm performance without effective ESG integration. Model 3 introduces the interaction term to examine the moderating effects of Financial Slack and ESG regulatory compliance. The interaction between ESG performance and Financial Slack (ESG*FS) is found to be negative and statistically significant ($\beta =$

-0.015, $p < 0.05$). This indicates that Financial Slack weakens the positive relationship between ESG performance and financial performance. Therefore, H2 is not supported.

This finding suggests that excessive Financial Slack may reduce managerial discipline and lead to inefficient allocation of resources, including ESG-related investments. As a result, ESG initiatives may not be implemented optimally, thereby weakening their impact on financial performance. In contrast, the interaction between ESG performance and ESG regulatory compliance (ESG*R) is positive and highly significant ($\beta = 0.176$, $p < 0.01$). This indicates that regulatory compliance strengthens the relationship between ESG performance and financial performance. Therefore, H3 is supported. This result highlights the importance of regulatory frameworks in ensuring that ESG practices are implemented effectively and consistently (Ismail et al., 2022; J. Lee et al., 2022).

Endogenety concerns

An alternative measure of Financial Performance

To ensure the reliability and validity of the main findings, this study employs alternative measures of financial performance, namely Return on Equity (ROE) and Tobin Q, in addition to the baseline measure of Return on Assets (ROA). The use of multiple proxies allows for a more comprehensive evaluation of firm performance, capturing both internal profitability and external market valuation. Table 5 presents the regression results using ROE and Tobin Q as alternative dependent variables; the findings indicate that ESG performance maintains a positive but statistically insignificant relationship with both ROE ($\beta = 0.086$, $p < 0.259$) and Tobin Q ($\beta = 0.003$, $p < 0.258$) in Model 1.

Table 5
Robustness Test Using Alternative Measures of Financial Performance

	Model 1		Model 2		Model 3	
	ROE	Tobin-Q	ROE	Tobin-Q	ROE	Tobin-Q
Constant	-64.007	-1.709	-55.908	-2.056	-56.307	-1.992
	(0.259)	(0.719)	(0.318)	(0.684)	(0.316)	(0.711)
ESG	0.086	0.003	0.063	0.008	-0.214	0.021
	(0.259)	(0.258)	(0.166)	(0.235)	(0.074)	(0.282)
FS			-0.058	-0.002	-0.070	0.021
			(0.645)	(0.386)	(0.952)	(0.851)
R			-1.806	0.179	-20.428	0.482
			(0.289)	(0.324)	(0.320)	(0.433)
ESG*FS					0.020	0.090
					(0.975)	(0.815)
ESG*R					0.350***	-0.009
					(0.002)	(-0.524)
Size	-0.698**	-0.227	-0.720**	-0.231	-0.748**	-0.240
	(0.080)	(0.000)	0.068	(0.000)	(0.064)	(0.000)
Growth	5.698***	0.186	5.749***	0.171	5.777***	0.171
	(0.000)	(0.235)	(0.000)	(0.248)	(0.000)	(0.230)
lnINGDP	2.863	0.231	2.688	0.239	3.223	0.116
	(0.102)	(0.245)	(0.177)	(0.231)	(0.133)	(0.140)
Voice	-3.726	-0.106	-2.305	-0.213	-3.518	-0.101
	(0.157)	(0.636)	(0.427)	(0.412)	(0.221)	(0.467)
Gov	5.638**	0.180	5.666**	0.184	5.525**	0.184
	(0.016)	(0.307)	(0.009)	(0.349)	(0.007)	(0.371)
Reg	-0.026	-0.040	-0.113	-0.106	-0.259	-0.044
	(0.980)	(0.447)	(0.926)	(0.548)	(0.730)	(0.371)
R	0.144	0.194	0.146	0.196	0.063	5.710
F	(4.541)	(8.723)	(3.681)	(6.980)	(3.856)	(0.127)
N	2134	2134	2134	2134	2134	2134
* = Signifikan pada 10% ($p < 0.10$)						
** = Signifikan pada 5% ($p < 0.05$)						
*** = Signifikan pada 1% ($p < 0.01$)						
Source (s): created by authors 2025						

This suggests that although ESG practices contribute to firm sustainability and operational improvements, their impact on shareholder return and market valuation is not immediately observable. From a theoretical standpoint, this result can be interpreted through stakeholder theory, which emphasizes that ESG initiatives primarily enhance long-term relationships with stakeholders rather than generating short-term financial gains. Consequently, improvement in ROE and Tobin Q may require a longer time horizon to materialize, as market participants and shareholders gradually internalize ESG-related benefits (Cucari et al., 2018; Jasni et al., 2020; Tabassam et al., 2021).

In Model 2, the inclusion of Financial Slack (FS) and ESG regulatory compliance (R) does not yield a significant direct effect on ROE or Tobin Q. FS shows a negative but insignificant coefficient for both ROE ($\beta = 0.058$, $p < 0.645$) and Tobin Q ($\beta = -0.002$, $p < 0.386$), while R also remains insignificant. These findings suggest that resource availability and regulatory compliance alone are insufficient to directly enhance financial performance, particularly when measured from a shareholder or market perspective. The moderating analysis in Model 3 reveals more nuanced insights. The interaction between ESG and Financial Slack (ESG*FS) is not significant for both ROE and Tobin Q, indicating that financial Slack does not moderate the relationship between ESG and financial performance. In contrast, the interaction between ESG and regulatory compliance (ESG*R) demonstrates a positive and statistically significant effect on ROE ($\beta = 0.350$, $p < 0.02$), while remaining insignificant for Tobin Q.

Additional Robustness Analyses

ESG Component Analysis

This study conducts an additional analysis by disaggregating ESG performance into its three core components Environmental (E), Social (S), and Governance (G) to examine their individual effect on financial performance, proxied by ROA, ROE, and Tobin Q. This approach enables a more granular understanding of which ESG dimensions drive firm performance. Furthermore, the analysis incorporates two moderating variables, namely financial slack (FS) and ESG regulation compliance (R), using a hierarchical regression framework. Table 6 reports the baseline result (Model 1), which shows the direct effect of each ESG component. The findings indicate that the environmental component exhibits a positive and statistically significant relationship with ROA ($\beta = 0.036$, $p < 0.05$) and Tobin Q ($\beta = 0.016$, $p < 0.05$), suggesting that environmental performance contributes to both accounting-based and market-based performance.

Table 6
Direct Effect Estimation of ESG Components

	<i>Environmental</i>			<i>Social</i>			<i>Governance</i>		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-2.231	-67.143	-2.499	2.683	-58.799	-1.327	2.224	-59.938	-1.338
	(0.916)	(0.239)	(0.640)	(0.897)	(0.295)	(0.785)	(0.916)	(-0.271)	(0.783)
Score	0.036**	0.053	0.016**	0.024	0.045	0.006	0.015	0.026	-0.004**
	(0.029)	(0.196)	(0.048)	(0.429)	(0.514)	(0.626)	(0.797)	(0.778)	(0.053)
Size	-0.323**	-0.643*	-0.254***	-0.286**	-0.586	-0.219***	-0.253**	-0.539	-0.203***
	(0.019)	(0.092)	(0.000)	(0.037)	(0.129)	(0.000)	(0.045)	(0.147)	(0.000)
Growth	4.210***	5.669***	0.169	4.247***	5.730***	0.178	4.247***	5.733***	0.173
	(0.000)	(0.000)	(0.253)	(0.000)	(0.000)	(0.229)	(0.000)	(0.000)	(0.264)
lnGDP	0.396	3.045	0.263	0.199	2.716	0.219	0.220	2.743	0.240
	(0.580)	(0.142)	(0.185)	(0.782)	(0.188)	(0.271)	(0.767)	(0.183)	(0.225)
Voice	0.022	-4.074	-0.139	0.065	-3.911	-0.119	-0.003	-4.002	-0.286
	(0.999)	(0.120)	(0.594)	(0.960)	(0.144)	(0.582)	(0.978)	(0.142)	(0.239)
Gov	0.284	6.050**	0.236	0.199	5.999**	0.219	0.172	5.761	0.333*
	(0.691)	(0.013)	(0.239)	(0.784)	(0.014)	(0.277)	(0.831)	(0.005)**	(0.102)
Reg	-0.571*	0.076	-0.058	-0.682*	-0.076	-0.082	-0.602**	-0.138	-0.045
	(0.087)	(0.956)	(0.599)	(0.050)	(0.956)	(0.433)	(0.042)	(0.868)	(0.552)
R	0.244	0.123	0.198	0.228	0.140	0.192	0.227	0.140	0.198
F	13.126	4.499	9.187	12.396	4.320	8.586	12.301	4.268	9.157
Sample Size	2134	2134	2134	2134	2134	2134	2134	2134	2134
* = Signifikan pada 10% ($p < 0.10$)									
** = Signifikan pada 5% ($p < 0.05$)									
*** = Signifikan pada 1% ($p < 0.01$)									
Source (s): created by authors 2025									

Table 7
Direct Effect Estimation of ESG Components

	<i>Environmental</i>			<i>Social</i>			<i>Governance</i>		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-3.360	-58.763	-2.705	1.399	-50.854	-1.611	1.053	51.630	-1.582
	(0.869)	(0.287)	(0.580)	(0.952)	(0.374)	(0.765)	(0.966)	(0.367)	(0.769)
Score	0.036**	0.052	0.005**	0.025	0.040	0.001	0.015	0.024	-0.004*
	(0.030)	(0.210)	(0.042)	(0.418)	(0.572)	(0.575)	(0.784)	(0.712)	(0.059)
FS	0.172	-0.037	-0.005	0.032	-1.957	-0.002	0.032	-0.032	-0.002
	(0.781)	(0.653)	(0.367)	(0.524)	(0.289)	(0.420)	(0.529)	(0.690)	(0.409)
R	0.172	-1.971	0.177	0.170	-1.957	0.174	0.136	-2.022	0.153
	(0.781)	(0.284)	(0.331)	(0.784)	(0.289)	(0.341)	(0.847)	(0.273)	(0.384)
Size	-0.314**	-0.689*	-0.23***	-0.257**	-0.584	-0.222***	-0.244*	-0.562	-0.205***
	(0.011)	(0.082)	(0.000)	(0.043)	(0.120)	(0.000)	(0.053)	(0.134)	(0.000)
Growth	4.186*	5.722***	0.165	4.242***	5.782***	0.174	4.243***	5.785***	0.169
	(0.000)	(0.000)	(0.267)	(0.000)	(0.000)	(0.240)	(0.000)	(0.000)	(0.254)
lnGDP	0.427	2.823	0.271	0.241	2.511	0.225	0.252	2.528	0.246
	(0.552)	(0.175)	(0.173)	(0.745)	(0.225)	(0.259)	(0.732)	(0.222)	(0.217)
Voice	-0.120	-2.501	-0.203	-0.076	-2.470	-0.223	-0.145	-2.514	-0.201
	0.873	(0.374)	(0.381)	(0.940)	(0.381)	(0.396)	(0.890)	(0.383)	(0.126)
Gov	0.295	6.071**	0.223	0.222*	5.941**	0.186	0.190	5.828***	0.318
	(0.688)	(0.013)	(0.248)	(0.768)	(0.014)	(0.289)	(0.812)	(0.001)	(0.126)
Reg	-0.575*	-0.001	-0.024	-0.666	-0.135	-0.049	-0.608**	-0.210	-0.034
	(0.087)	(0.986)	(0.607)	(0.050)	(0.891)	(0.525)	(0.042)	(0.831)	(0.635)
R	0.234	0.146	0.181	0.228	0.143	0.195	0.227	0.143	0.198
F	10.244	3.660	7.327	9.691	3.511	6.856	9.619	3.481	7.266
-Sample Size	2134	12134	12134	12134	12134	12134	12134	12134	12134
* = Signifikan pada 10% ($p < 0.10$)									
** = Significant pada 5% ($p < 0.05$)									
*** = Significant pada 1% ($p < 0.01$)									
Source (s): created by authors 2025									

However, its effect on ROE is not statistically significant. In contrast, the social and governance components do not demonstrate a consistent significant effect across the three financial performance proxies, indicating that their direct contribution remains limited in this model specification. These findings partially support stakeholder theory, which posits that firms engaging in environmental responsibility are more likely to gain legitimacy and trust from stakeholders, ultimately improving firm performance. Environmental initiatives are often more observable and measurable, thereby generating more immediate economic benefit compared to social and governance practices. Table 7 (Model 2) introduces financial slack and ESG regulatory compliance as additional independent variables. The results reveal that neither FS nor R has a statistically significant direct effect on financial performance across most specifications.

Table 8 (Model 3) presents the full model incorporating interaction terms, providing insight into the moderating roles of FS and R. The results demonstrate heterogeneous moderating effect across ESG components. For the environmental dimension, the interaction between environmental score and financial slack (FS) shows a positive and significant impact of environmental performance on profitability. However, this interaction is not significant for ROE and Tobin Q. Additionally, the interaction between environmental score and regulatory compliance (ER) is positive and significant for both ROA ($\beta = 0.112$, $p < 0.05$) and ROE ($\beta = 0.294$, $p < 0.01$), suggesting that regulatory frameworks reinforce the effectiveness of environmental initiatives in improving accounting-based performance.

Table 8
Direct Effect Estimation of ESG Components

	Environmental			Social			Governance		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-5.604	-72.306	-2.594	2.070	-48.462	-1.671	5.288	-44.983	-1.725
	(0.777)	(-1.189)	(0.616)	(0.923)	(0.396)	(0.757)	(0.791)	(0.435)	(0.749)
Score	-0.026	-0.176	0.018	-0.051**	-0.214**	0.015	-0.075*	-0.004	-0.002
	(1.110)	(0.010)	(0.219)	(0.041)	(0.031)	(0.561)	(0.055)	(0.458)	(0.670)
FS	0.294***	-0.106	0.003	-0.165	-0.268	-0.029	-0.049	0.462	0.040
	(0.018)	(0.726)	(0.928)	(0.347)	(0.641)	(0.446)	(0.874)	(0.589)	(0.713)
R	-3.623***	-12.708***	0.225	-3.457**	-13.948**	0.381	-8.246**	-14.711	0.462
	(0.011)	(0.000)	(0.498)	(0.025)	(0.020)	(0.329)	(0.049)	(0.224)	(0.690)
Score*FS	0.017***	0.007	-0.006	0.016	0.017	0.011	0.007	-0.002	0.040
	(0.018)	(0.850)	(0.851)	(0.275)	(0.685)	(0.537)	(0.843)	(0.573)	(0.713)
Score*R	0.112***	0.294***	-0.001	.115***	0.357***	-0.003	0.114**	0.168	-0.002
	0.011	(0.000)	(0.865)	(0.015)	(0.012)	(0.530)	(0.044)	(0.289)	(0.786)
Size	-0.308**	-0.709*	-0.237***	-0.251**	-0.577***	-0.221***	-0.261*	-0.552	-0.205***
	(0.022)	(0.067)	(0.000)	(0.047)	(0.008)	(0.000)	(0.055)	(0.140)	(0.000)
Growth	4.217***	5.729***	0.165	4.281***	5.701***	0.171	.230***	5.759***	-0.150
	(0.000)	(0.000)	(0.267)	(0.000)	(0.007)	(0.249)	(0.000)	(0.000)	(0.254)
lnGDP	0.593	3.652*	0.265	0.325	2.757	0.223	0.366	2.638	0.238
	(0.364)	(0.083)	(0.187)	0(.653)	(0.182)	(0.263)	(0.612)	(0.184)	(0.234)
Voice	-0.570	-4.179	-0.217	-0.307	-3.509	-0.206	-0.377	-2.784***	-0.360
	(0.561)	(0.157)	(0.387)	(0.688)	(0.237)	(0.433)	(0.612)	(0.000)	(0.190)
Gov	0.250	6.255***	0.221	0.195	5.884***	0.194	0.164	5.735**	0.316
	(0.736)	0.005	(0.274)	(0.791)	(0.009)	(0.292)	(0.839)	(0.017)	(0.130)
Reg	-0.671	-0.054	-0.025	-0.741**	-0.308	-0.042	-0.753**	-0.333	-0.005
	(0.777)	(0.958)	(0.689)	(0.032)	(0.667)	(0.573)	(0.031)	(0.736)	(0.613)
R	0.260	0.173	0.181	0.240	0.143	0.197	0.233	0.146	0.180
F	10.540	4.346	6.013	8.839	3.802	5.676	8.299	2.983	5.949
Sample Size	2134	2134	2134	2134	2134	2134	2134	2134	2134
* = Signifikan pada 10% ($p < 0.10$)									
** = Significant pada 5% ($p < 0.05$)									
*** = Significant pada 1% ($p < 0.01$)									

For the social component, the interaction between social score and Financial Slack (FS) does not yield significant results across all financial performance measures. This finding implies that the availability of slack resources does not enhance the financial impact of social initiatives. Conversely, the onteraction between social score and regulatory compliance (R) is positive and statically significant for A ($\beta = 0.115$, $p < 0.05$) and ROE ($\beta = 0.357$, $p < 0.05$), but not for Tobin Q. Thus suggests that regulatory pressure plays a crucial role in ensuring that social performance transaltes into improved accounting aotcomes, although it may not immediately influence market perceptions. For the governance component, the moderating effects are generally weaker. The interaction between governance score and Financial Slack (FS) is not statistically significant across all models, indicating the absense of a moderating role. Meanwhile, the interaction between governance score and regulatory compliance (R) shows a, limited positive effect on ROA ($\beta = 0.114$, $p < 0.05$), but remains insignificant for ROE and Tobin Q. This suggests that governance improvement may require a longer time horizon to be reflected in financial and market performance.

ESG Performance during Covid-19 and Post-COVID-19 Period

The additional analysis presented in Table 9 examines the relationship between ESG performance and financial performance across the Covid-19 and post-Covid-19 periods, revealing important temporal dynamics. The empirical results show that ESG performance has a positive and marginally significant effect on accounting-based performance during the Covid-19 period, with coefficients of ($\beta = 0.054$, $p = 0.081$) for ROA and ($\beta = 0.145$, $p = 0.058$) for ROE, indicating

significance at the 10% level. However, in the post-pandemic period, the relationship becomes statistically insignificant, with coefficients of ($\beta = 0.019$, $p = 0.746$) for ROA and ($\beta = -0.114$, $p = 0.786$) for ROE. For market-based performance (Tobin Q), ESG does not exhibit a statistically significant effect in either period ($\beta = 0.020$, $p = 0.116$) during Covid-19 and ($\beta = 2.740$, $p = 0.988$) post covid-19.

Further analysis incorporating moderating variables in Table 9 (models 2 and 3) indicates that Financial Slack (FS) does not have a significant direct effect on financial performance in either period. However, when interaction effects are considered, ESG*FS show a negative and significant impact on ROA during the Covid-19 period ($\beta = -0.008$, $p = 0.016$), suggesting that excess financial resources may weaken the effectiveness of ESG initiatives in more crisis conditions. In contrast, ESG regulatory compliance (R) demonstrates a more consistent moderating role. The interaction term ESG*R has a positive and significant effect on ROA both during Covid-19 ($\beta = 0.176$, $p = 0.013$) and post covid-10 ($\beta = 0.224$, $p < 0.023$). nevertheless, no significant moderating effect is observed for Tobin Q in either period.

These findings can be explained through stakeholder theory and legitimacy theory. From a stakeholder theory perspective, firms intensify ESG engagement during crisis periods to address heightened expectations from stakeholders, thereby improving short-term accounting performance. Meanwhile, legitimacy theory explains that companies utilize ESG practices as a strategic tool to maintain social legitimacy, particularly under crisis conditions such as the Covid-19 pandemic. The stronger moderating role of regulatory compliance (R) further supports the notion that institutional pressure enhances firms' incentives to align ESG practices with societal expectations. The cross-country analysis presented in Table 10 provides further insights into the heterogeneous impact of ESG performance on financial performance across six ASEAN Countries During The Covid-19 and post-Covid-19 periods. The findings reveal that the influence of ESG varies substantially depending on national context, institutional settings, and resource availability.

Table 9
Regression Results during the COVID-19 and Post-COVID-19 Periods

	Model 1						Model 2						Model
	ROA		ROE		Tobin-q		ROA		ROE		Tobin-q		ROA
	Covid-19	Pasca Covid-19	Covid-19	Pasca Covid-19	Covid-19	Pasca Covid-19	Covid-19	Pasca Covid-19	Covid-19	Pasca Covid-19	Covid-19	Pasca Covid-19	Covid-19
Constant	-3.785	28.182	-89.859	19.424	0.899	-6.420	-4.900	27.074	-84.160	28.314	1.142	-7.269	-4.40
	(0.881)	(0.373)	(0.177)	(0.867)	(0.882)	(0.544)	(0.845)	(0.394)	(0.210)	(0.784)	(0.859)	(0.493)	(0.85)
ESG	0.054*	0.019	0.145*	-0.014	0.020	2.740	0.054*	0.021	0.146*	-0.032	0.021*	0.012	-0.04
	(0.081)	(0.746)	(0.058)	(0.786)	(0.116)	(0.988)	(0.084)	(0.689)	(0.056)	(0.667)	(0.098)	(0.857)	(0.85)
FS							0.022	0.022	-0.043	-0.066	-0.003	0.003	0.94
							(0.784)	(0.859)	(0.654)	(0.738)	(0.235)	(0.888)	(0.00)
R							0.175	0.479	-0.928	-3.751	0.078	0.369	-7.62
							(0.847)	(0.623)	(0.685)	(0.265)	(0.746)	(0.256)	(0.01)
ESG*FS													-0.00
													(0.01)
ESG*R													0.17
													(0.01)
Size	-0.317*	-0.109	-0.653	-0.579	-0.224***	-0.256***	-0.312*	-0.002	-0.676	-0.623	0.251**	-0.233*	-0.96
	(0.078)	(0.233)	(0.194)	(0.335)	(0.000)	(0.000)	(0.085)	(0.251)	(0.183)	(0.284)	(0.020)	(0.060)	(0.11)
Growth	7.292***	-1.145	8.698***	0.232	0.213	0.142	7.283***	-1.155	8,741***	0.322	0.214	0.131	7.25
	(0.000)	(0.516)	(0.000)	(0.941)	(0.232)	(0.598)	(0.000)	(0.122)	(0.000)	(0.913)	(0.228)	(0.631)	(0.00)
lnGDP	0.392	-0.731	3.688	-0.011	0.127	0.422	0.424	-0.734	3.525	-0.166	0.116	0.427	0.54
	(0.659)	(0.516)	(0.126)	(0.986)	(0.591)	(0.280)	0.634)	(0.527)	(0.145)	(0.976)	(0.629)	(0.263)	(0.53)
Voice	-0.227	-0.048	-3.976	-3.443	-0.049	-0.141	-0.362	-0.364	-3.232	-1.076	-0.073	-0.366	-0.96
	(0.841)	(0.979)	(0.187)	(0.514)	(0.843)	(0.770)	(0.775)	(0.834)	(0.359)	(0.855)	(0.780)	(0.489)	(0.44)
Gov	1.525	-1.281	7.547**	3.478	0.424*	-0.005	1.533	-1.260	7.52**	3.716	0.384	-0.028	1.42
	(0.116)	(0.240)	(0.014)	(0.365)	(0.091)	(0.977)	(0.116)	(0.231)	(0.014)	(0.334)	(0.198)	(0.925)	(0.14)
Reg	-0.634	-1.219	0.338	-1.537	-0.080	-0.054	0.645	-1.260**	0.276	-1.234	-0.067	-0.079	-0.80
	(0.114)	(0.746)	(0.776)	(0.458)	(0.380)	(0.752)	(0.127)	(0.042)	(0.823)	(0.556)	(0.460)	(0.662)	(0.05)
R	0.350	0.161	0.198	0.099	0.199	0.199	0.350	0.162	0.199	0.114	0.295	0.189	0.36
F	19.931	2.231	5.625	0.839	5.797	3.731	15.491	1.766	4.415	0.820	4.684	3.054	14.3
Sample Size	1066	1068	1066	1068	1066	1068	1066	1068	1066	1068	1066	1068	1066
* = Signifikan pada 10% ($p < 0.10$)													
** = Signifikan pada 5% ($p < 0.05$)													
*** = Signifikan pada 1% ($p < 0.01$)													
Source (s): Authors elaboration													

In Indonesia and Malaysia, ESG performance and its interaction with Financial Slack (FS) and regulatory compliance (R) do not show statistically significant effects on financial performance in both periods, indicating that ESG practices have not yet translated into measurable financial outcomes in these markets. In contrast, Thailand exhibits a significant negative relationship between ESG and financial performance (ROA) in the post Covid-19 period ($\beta = -0.188$, $p = 0.008$), suggesting that ESG investments may impose a short-term cost that outweighs immediate financial benefit. Meanwhile, Singapore demonstrates a positive and significant moderating effect of regulatory compliance, where the interaction term ESG*R positively affects financial performance in the post-pandemic period ($\beta = 0.437$, $p < 0.005$). This indicates that strong regulatory frameworks enhance the effectiveness of ESG implementation in improving firm performance.

Table 10
Regression Results of ESG Performance on Financial

	Indonesia		Malaysia		Thailand		Singapura		Vietnam		Philipine	
	Covid-19 (2020–2022)	Pasca Covid-19 (2023–2024)	Covid-19 (2020–2021)	Pasca Covid-19 (2022–2024)	Covid-19 (2020–2021)	Pasca Covid-19 (2022–2024)	Covid-19 (2020–2022)	Pasca Covid-19 (2023–2024)	Covid-19 (2020–2022)	Pasca Covid-19 (2023–2024)	Covid-19 (2020–2022)	Pasca Covid-19 (2023–2024)
Constant	22,542 (0.380)	6.037 (0.216)	-1.672 (0.924)	14.963 (0.417)	11.645 (0.134)	16.078 (0.025)	7.720 (0.042)	5.254 (0.327)	-48.745 (0.689)	-14.045 (0.317)	-4.943 (0.688)	-7.132 (0.879)
ESG	-0.311 (0.498)	-0.027 (0.613)	0.075 (0.853)	-0.213 (0.482)	-0.107 (0.138)	-0.188** (0.008)	-0.103 (0.125)	-0.012 (0.763)	1.463 (0.575)	0.634 (0.137)	0.272 (0.425)	0.355 (0.896)
FS	0.857 (0.566)	-2.023 (0.114)	1.658* (0.070)	0.362 (0.697)	-0.515 (0.693)	-1.504 (0.169)	0.092 (0.881)	0.287 (0.781)	10.649* (0.072)	2.212 (0.851)	4.480** (0.012)	6.156 (0.278)
R	-22.246 (0.286)	-10.257 (0.118)	-3.237 (0.847)	-15.493 (0.236)	-1.550 (0.753)	-6.410 (0.146)	3.924 (0.371)	-5.289 (0.254)	33.159 (0.788)	22.980 (0.890)	-10.527 (0.359)	-12.169 (0.865)
ESG*FS	-0.025 (0.981)	0.0552 (0.131)	-0.040 (0.105)	-0.016 (0.796)	0.024 (0.367)	0.042 (0.125)	-0.003 (0.843)	-0.006 (0.736)	0.362** (0.040)	-0.124 (0.700)	0.006*** (0.010)	-0.006 (0.137)
ESG*R	0.587 (0.338)	0.077 (0.245)	0.152 (0.669)	0.329 (0.360)	0.010 (0.981)	0.124 (0.149)	-0.019 (0.844)	0.437*** (0.005)	-0.741 (0.780)	2.087 (0.126)	0.093 (0.795)	0.097 (0.956)
R	0.239	0.216	0.229	0.123	0.175	0.231	0.288	0.367	0.939	0.037	0.466	0.576
F	3.421	1.598	1.914	0.598	0.957	1.992	3.725	5.298	11.435	(5.227)	7.048	3.112
Sample Size	308	189	199	333	164	284	244	175	15	12	136	75
* = Signifikan pada 10% ($p < 0.10$)												
** = Signifikan pada 5% ($p < 0.05$)												
*** = Signifikan pada 1% ($p < 0.01$)												
ROA												

Source (s)

created by authors 2025

Furthermore, in Vietnam and the Philippines, Financial Slack (FS) plays a more prominent role. In Vietnam, FS shows a positive effect ($\beta = 10.649$, $p = 0.071$), and the interaction ESG*FS is also positive and significant ($\beta = 0.362$, $p = 0.040$). Similarly, in the Philippines, FS has a strong positive effect ($\beta = 4.480$, $p < 0.01$), and ESG*FS is also significant ($\beta = 0.006$, $p = 0.010$). These findings suggest that firms with greater financial slack are better able to leverage ESG initiatives to enhance financial performance.

ESG Analysis Based on Percentile Distribution

Drawing on stakeholder theory and legitimacy theory, this additional analysis examines whether the impact of ESG performance on financial outcomes varies across firm percentile group, as presented in Table 11. The result from model 1 indicates that ESG has a statistically significant positive effect on ROA in the upper percentile group < 75 ($\beta = 0.164$, $p = 0.034$) and ROE in the middle to lower percentile group ($\beta = 0.306$, $p = 0.087$), suggesting that firms with stronger ESG performance tend to achieve higher profitability, particularly when stakeholder expectations are more pronounced. However, ESG does not significantly influence Tobin Q across all percentile groups, implying that market valuation does not immediately internalize ESG improvement.

Table 11
Percentile Model 1

Model 1	< 25			25–75			> 75		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-63.343	-58.341	-17.716	47.558	-130.357	14.481	-73.105	-28.170	-15.929
	(0.086)	(0.572)	(0.248)	(0.082)	(0.148)	(0.022)	(0.071)	(0.277)	(0.093)
ESG	-0.034	0.136	-0.007	0.043	-0.023	0.021	0.164**	0.306*	0.020
	(0.459)	(0.517)	(0.713)	(0.617)	(0.886)	(0.444)	(0.034)	(0.087)	(0.549)
Size	0.124	0.288	-0.314**	-0.565**	-0.812	-0.201***	-0.252	-0.818	-0.079*
	(0.656)	(0.676)	(0.010)	(0.015)	(0.232)	(0.000)	(0.249)	(0.489)	(0.097)
Growth	4.857***	10.988***	0.331	4.270**	0.611	0.031	3.515***	9.654***	0.235
	(0.000)	(0.000)	(0.375)	(0.010)	(0.819)	(0.876)	(0.000)	(0.004)	(0.339)
lnGDP	2.442*	2.078	0.878	-1.306	5.541*	-0.328*	2.740*	1.375	0.655
	(0.082)	(0.576)	(0.117)	(0.174)	(0.089)	(0.096)	(0.070)	(0.178)	(0.177)
Voice	-4.945**	-6.646	-0.256	1.253	-10.506**	0.098	2.930*	8.878**	-0.424
	(0.016)	(0.158)	(0.629)	(0.365)	(0.018)	(0.772)	(0.089)	(0.037)	(0.262)
Gov	0.897	2.459	0.324	-0.951	9.087**	-0.107	0.952	-0.649	0.643*
	(0.570)	(0.557)	(0.615)	(0.315)	(0.019)	(0.543)	(0.437)	(0.853)	(0.059)
Reg	1.522**	2.118	0.060	-1.504**	-0.018	-0.184**	-0.766	-2.030	0.117
	(0.037)	(0.258)	(0.863)	(0.039)	(0.994)	(0.050)	(0.314)	(0.164)	(0.555)
R	0.257	0.253	0.215	0.252	0.257	0.269	0.294	0.260	0,166
F	5.842	3.733	2.699	7.790	7.727	8.914	5.320	4.090	1,546
Sample Size	520	520	520	1056	1056	1056	558	558	558
* = Signifikan pada 10% ($p < 0.10$)									
** = Signifikan pada 5% ($p < 0.05$)									
*** = Signifikan pada 1% ($p < 0.01$)									
Source (s): created by authors 2025									

Table 11 reports the baseline regression results (Model 1). The results indicate that ESG has a statistically significant positive effect. Table 12 reports the estimation results of Model 1, which incorporates Financial Slack (FS) and ESG regulatory compliance (R) as additional explanatory variables.

Table 12
Percentile Model 2

Model 2	< 25			25–75			> 75		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-62.813	-51.539	-28.135	49.314	-119.122	14.032	-74.172	-18.658	-11.291
	(0.067)	(0.266)	(0.262)	(0.087)	(0.173)	(0.015)	(0.077)	(0.838)	(0.134)
ESG	-0.017	0.199	-0.005	0.038	-0.008	0.121	0.163	0.219	0.019
	(0.372)	(0.615)	(0.865)	(0.676)	(0.104)	(0.442)	(0.889)	(0.082)	(0.889)
FS	0.178	0.347	-0.192	0.019	-0.082	-0.015	-0.052	-0.058	-0.002
	(0.195)	(0.385)	(0.581)	(0.390)	(0.209)	(0.536)	(0.568)	(0.115)	(0.477)
R	-0.457	-2.631	0.187	0.108	-2.718	0.120	0.951	0.083	0.040
	(0.697)	(0.198)	(0.197)	(0.349)	(0.401)	(0.392)	(0.453)	(0.985)	(0.191)
Size	0.184	0.358	-0.345***	-0.536**	-0.841	-0.104***	-0.251	-0.911	-0.012
	(0.126)	(0.620)	(0.000)	(0.017)	(0.390)	(0.000)	(0.229)	(0.194)	(0.778)
Growth	4.818**	1.110**	0.312	4.266***	0.671	0.026	3.156**	8.178**	0.177
	(0.019)	(0.010)	(0.389)	(0.009)	(0.901)	(0.931)	(0.020)	(0.050)	(0.276)
lnGDP	2.310*	1.971	0.887	-1.119	5.361*	-0.348*	2.760*	1.155	0.614*
	(0.087)	(0.599)	(0.114)	(0.184)	(0.098)	(0.100)	(0.075)	(0.761)	(0.093)
Voice	-4.733**	-5.181*	-0.184	1.035	-8.883*	-0.023	2.178	9.064*	-0.388
	(0.019)	(0.099)	(0.195)	(0.715)	(0.077)	(0.108)	(0.312)	(0.084)	(0.425)
Gov	0.988	2.821	0.298	-0.925	9.096**	-0.024***	0.887	-0.788	0.178*
	(0.537)	(0.418)	(0.646)	(0.318)	(0.014)	(0.009)	(0.540)	(0.822)	(0.070)
Reg	1.399	1.657	0.019	-1.552***	0.042***	-0.194*	-0.774	-2.698	0.098
	(0.198)	(0.389)	(0.771)	(0.000)	(0.000)	(0.083)	(0.315)	(0.157)	(0.624)
R	0.312	0.256	0.267	0.254	0.155	0.271	0.298	0.170	0.190
F	4.720	3.076	2.149	6.117	2.099	7.040	4.196	3.187	1.227
Sample Size	520	520	520	1056	1056	1056	558	558	558
* = Signifikan pada 10% ($p < 0.10$)									
** = Significant pada 5% ($p < 0.05$)									
*** = Significant pada 1% ($p < 0.01$)									
Source (s): created by authors 2025									

Model 2 (Table 12) shows that Financial Slack (FS) and regulatory compliance (R) do not exhibit significant direct effects on financial performance across all percentile groups, indicating limited standalone explanatory power. In contrast, Model 3 (Table 13) reveals significant moderating effects. Specifically, the interaction between ESG and FS negatively affects ROA in the middle percentile group ($\beta = -0.106$, $p = 0.020$), while ESG*R negatively influences ROA ($\beta = -0.173$, $p = 0.048$) and positively affects ROE ($\beta = 1.168$, $p = 0.062$). In the upper percentile group, ESG*R positively impacts ROA ($\beta = 0.558$, $p = 0.011$).

Table 13 presents Model 3, which includes the interaction terms between ESG and Financial Slack (ESG*FS) as well as ESG and regulatory compliance (ESG*R) to examine the moderating effects.

Table 13
Percentile Model 3

Model 3	< 25			25–75			> 75		
	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q	ROA	ROE	Tobin-Q
Constant	-27.198	-25.198	-17.108	38.310	-37.019	-1.947	-36.190	20.478	18.772
	(0.231)	(1.727)	(0.474)	0.072	(0.192)	(0.711)	(0.384)	(0.811)	(0.537)
ESG	-0.354	-0.019	0.044	-0.079	-1.077*	0.021	-0.241*	-0.166	0.051
	(0.898)	(0.199)	(0.752)	(0.675)	(0.065)	(0.282)	(0.051)	(0.569)	(0.619)
FS	3.195	5.496	0.101	0.877**	-1.249	0.020	-4.209*	-1.065	1.093
	(0.173)	(0.103)	(0.430)	(0.019)	(0.451)	(0.101)	(0.059)	(0.843)	(0.743)
R	-24.109	-18.381	0.598	-6.381	-8.039	0.482	-28.780**	-26.902**	-1.104
	(0.128)	(0.458)	(0.881)	(0.372)	(0.203)	(0.442)	(0.010)	(0.045)	(0.772)
ESG*FS	-0.207	-0.154	-0.004	-0.106**	0.033	-0.202	0.079*	0.037	-0.028
	(0.196)	(0.198)	(0.398)	(0.020)	(0.291)	(0.815)	(0.061)	(0.855)	(0.597)
ESG*R	0.685	0.447	-0.132	-0.173**	1.168*	-0.026	0.558**	0.197	0.016
	(0.524)	(0.524)	(0.918)	(0.048)	(0.062)	(0.103)	(0.011)	(0.230)	(0.913)
Size	0.194	0.282*	-0.196**	-0.550**	-0.102	-0.249***	-0.245	0.947	-0.107
	(0.130)	(0.100)	(0.020)	(0.010)	(0.155)	(0.000)	(0.258)	(0.178)	(0.297)
Growth	2.394	10.403**	0.319	4.194***	0.635*	0.171	3.619***	8.782***	1.116*
	(0.593)	(0.019)	(0.395)	(0.000)	(0.084)	(0.250)	(0.000)	(0.000)	(0.059)
lnGDP	4.619**	1.459	0.834	-1.269	5.634*	0.226	2.204	0.575	-0.664
	(0.048)	(0.699)	(0.139)	(0.194)	(0.084)	(0.260)	(0.129)	(0.885)	(0.523)
Voice	-4.311	-4.794	-0.106	0.866	-3.319*	-0.211	2.754	9.858*	1.123
	(0.372)	(0.346)	(0.693)	(0.567)	(0.063)	(0.467)	(0.194)	(0.062)	(0.394)
Gov	0.575	2.365	0.265	-0.966	9.016**	0.184	0.198	-1.101	1.158
	(0.585)	(0.585)	(0.696)	(0.104)	(0.013)	(0.371)	(0.191)	(0.305)	(0.214)
Reg	1.446*	1.627	0.081	-1.549***	-0.030	-0.064	-0.977	-2.598*	0.228
	(0.084)	(0.130)	(0.101)	(0.000)	(0.999)	(0.558)	(0.105)	(0.090)	(0.641)
R	0.361	0.266	0.301	0.262	0.170	5.740	0.347	0.279	0.335
F	5.197	2.727	1.403	5.359	2.090	0.197	4.961	3.017	1.493
Sample Size	520	520	520	1056	1056	1056	558	558	558
* = Signifikan pada 10% ($p < 0.10$)									
** = Significant pada 5% ($p < 0.05$)									
*** = Significant pada 1% ($p < 0.01$)									
Source (s): created by authors 2025									

Discussion

This study reveals that ESG performance has a positive and statistically significant effect on accounting-based financial performance (ROA), while its effects on ROE and Tobin'Q are nit statically significant. This suggests that the benefit of ESG is primarily reflected in operational efficiency rather than market valuation. From a theoretical perspective, this finding is consistent with stakeholder theory, which argues that firms integrating stakeholder interests are more likely to achieve improved efficiency, reduced operational risk, and enhanced corporate reputation. These mechanisms collectively improve asset utilization efficiency, which is ultimately reflected in higher ROA. However, the absence of a significant relationship between ESG and Tobin's Q contradicts the traditional shareholder-value perspective and several prior studies that argue ESG should enhance firm valuation. Thus discrepancy suggests that capital markets in ASEAN countries have not fully incorporated ESG-related information into valuation processes. It indicates the presence of information asymmetry and valuation lag in emerging markets, where investors still prioritize short-term financial indicators over sustainability-related disclosures.

Furthermore, the findings strongly support legitimacy theory, which posits that firms adopt ESG practices to gain legitimacy from external stakeholders and society. The moderating effect of ESG regulatory compliance of ESG implementation. In this context, regulation functions not only as a compliance

mechanism but also as a legitimacy signal that enhances stakeholder trust and improves firms' performance through reputation benefits and reduced perceived risk. The moderating role of financial slack indicates that the availability of internal resources does not automatically enhance the effectiveness of ESG implementation. Instead, the results suggest that firms may not always translate excess resources into productive sustainability investments. This implies that the effectiveness of ESG is not only determined by resources availability but also by how strategically firms prioritize and allocate those resources within their sustainability agenda. The analysis of ESG components further reveals that only the environmental dimension consistently has a significant positive effect on financial performance. This can be explained through a stakeholder visibility mechanism, where environmental issues attract stronger public attention, regulatory scrutiny, and stakeholders' pressure compared to social and governance aspects; consequently, environmental performance is more likely to generate immediate reputation gains and operational efficiencies.

The Covid-19 analysis demonstrates that ESG performance is more effective during crisis periods but becomes insignificant in the post-pandemic period. This suggests that ESG functions as a resilience mechanism under uncertainty. During crisis conditions, stakeholders place greater emphasis on corporate responsibility and sustainability practices, making ESG an important tool for maintaining legitimacy and stability. However, once economic conditions stabilize, attention shifts back to traditional financial performance indicators. Cross-country differences further highlight strong institutional heterogeneity across ASEAN economies. Countries with stronger regulatory frameworks, such as Singapore, exhibit more significant ESG-performance relationships, while countries with weaker institutional environments, such as Indonesia and Malaysia, show limited effect. These findings reinforce legitimacy theory, emphasizing that the effectiveness of ESG practices depends heavily on institutional strength and regulatory enforcement. Additionally, in countries such as Vietnam and the Philippines, internal resources appear more relevant in supporting ESG outcomes, suggesting that contextual factors shape how firms translate resources into sustainability performance.

The main contribution of this study lies in three aspects. First, it provides empirical evidence from ASEAN markets, an underexplored context in global ESG literature. Second, it integrates ESG regulatory compliance and financial slack as contextual factors influencing ESG effectiveness. Third, it demonstrates the dynamic nature of ESG impact across crisis and non-crisis periods as well as across heterogeneous institutional environments. According to this study, it contributes to the ESG literature and offers implications for policymakers and corporate managers in designing sustainability strategies that are aligned with institutional conditions and stakeholders' expectations.

Conclusions

This study investigates the relationship between ESG performance and financial performance using a sample of 5,356 non-financial firms in ASEAN over the 2020–2024 period (2,134 firm-year observations). By employing robustness and additional tests, including Covid-19, across countries, and percentile analyses, the findings provide consistent evidence that ESG performance influences corporate financial outcomes. First, ESG performance has a positive effect on financial performance, particularly on ROA and ROE, indicating that firms adopting environmental, social, and governance practices achieve higher operational efficiency and profitability. This supports stakeholder theory, which posits that a firm creating value for stakeholders can enhance overall firm performance. Second, Financial Slack (FS) does not strengthen the ESG–Financial performance relationship. Instead, the interaction term (ESG*FS) tends to weaken ESG effectiveness, suggesting that excess financial resources reduce managerial discipline in allocating resources efficiently. This implies that ESG practices under slack conditions are more legitimacy-driven rather than value-creating.

Third, ESG regulatory compliance (R) considerably strengthens the relationship between ESG performance and financial performance. Firms with higher compliance benefit from improved financial outcomes, reduced risk exposure, and stronger investor confidence. This finding aligns with legitimacy theory, where firms seek conformity with regulatory expectations to gain social acceptance and economic benefit. Fourth, during the Covid-19 period, ESG, particularly when supported by regulatory compliance, has a stronger impact on ROA and ROE. However, in the post-pandemic period, this effect becomes insignificant, reflecting a shift in corporate priorities toward recovery and operational stabilization. Fifth, percentile analysis shows a heterogeneous effect. Firms in the high ESG group (> 75 percentile) experience the strongest financial benefit, while firms in the middle group (25–75 percentile) begin to benefit from regulatory support. Firms in the lower percentile (< 25) do not exhibit a significant ESG effect, indicating limited capability to leverage ESG practices without external support.

Sixth, cross-country analysis reveals that Singapore stands out, where ESG regulatory compliance strengthens the ESG–ROA relationship in the post-academic period. In contrast, Indonesia, Malaysia, Thailand, Vietnam, and the Philippines show largely insignificant results, reflecting structural challenges such as limited ESG infrastructure and reliance on traditional sectors. Seventh, further percentile-based interaction analysis confirms that regulatory compliance strengthens ESG impact in high-performing firms, while financial slack weakens ESG effectiveness in mid-level firms. Low ESG firms remain unaffected due to limited strategic integration. Finally, among ESG components, the environmental dimension shows a significant positive impact on financial performance, while the social and governance dimensions are not significant. This suggests that environmental initiatives provide more direct economic benefit, whereas social and governance practices may require longer time horizons to generate measurable financial returns.

Declarations

Author Contribution

All authors have made substantial contributions to the conception and design of the study, data collection, analysis, and interpretation of results. All authors have been involved in drafting and revising the manuscript critically for important intellectual content and have approved the final version for publication. The authors collectively take full responsibility for the accuracy, reliability, and integrity of the research.

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Figures

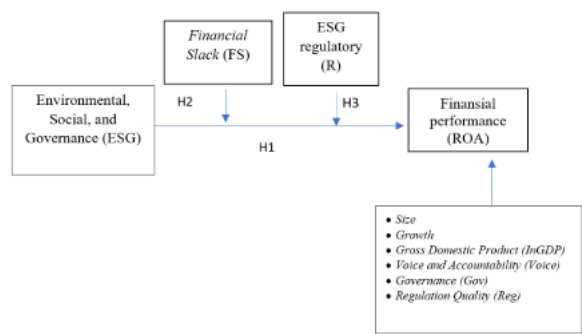


Figure 1

Conceptual Framework of the Study

Source: Author's elaboration