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Hierarchical Modelling of ESG Risk and Firm Value: A Mediation–Moderation Analysis

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Abstract

This study examines the effect of ESG Risk Rating on firm value using a hierarchical modelling approach. The research addresses inconsistent findings in emerging markets by analyzing direct, indirect, and conditional effects. Based on balanced panel data from 13 non-financial firms listed in IDX ESG Leaders during 2020–2023, three models are tested: a baseline model, a mediation model with asset efficiency (TATO), and a moderated mediation model with profitability (ROA). The results show that ESG Risk does not have a direct significant effect on firm value, but it does have a negative indirect effect through TATO. Profitability significantly moderates the relationship between TATO and firm value, but not between ESG Risk and TATO. The moderated mediation effect is only significant at low levels of profitability. These findings suggest that ESG efforts alone do not enhance firm value unless combined with operational efficiency and financial strength. This study offers insights for firms and policymakers to align ESG practices with internal performance, thereby creating sustainable value in emerging markets.

Keywords: ESG Risk Rating, Firm Value, Hierarchical Modelling Approach, Moderated Mediation

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INTRODUCTION

Sustainability has become a central concern in global business and investment decision-making. ESG (Environmental, Social, and Governance) serves as a framework to assess non-financial risks and is widely believed to enhance long-term firm value. In Indonesia, the launch of the IDX ESG Leaders (IDXESGL) index by the Indonesia Stock Exchange reflects the institutional push to mainstream sustainability in capital markets.

Sustainability has become a central pillar in global business and investment strategies, driven by growing awareness of environmental degradation, social inequality, and governance concerns. The ESG (Environmental, Social, and Governance) framework has emerged as a dominant tool to evaluate non-financial risks and long-term value creation. In Indonesia, this momentum is reflected in the establishment of the IDX ESG Leaders (IDXESGL) index and the Sustainable Finance Roadmap issued by the Financial Services Authority (OJK, 2022), marking a shift toward institutionalizing sustainability within financial markets.

However, empirical findings on the relationship between ESG and firm value remain inconsistent, particularly in emerging markets. Some studies report a positive relationship (Dwimayanti et al., 2023; Hardi et al., 2023), while others find negative or insignificant effects (Firmansyah et al., 2023; Kartika et al., 2023; Sulistyawati & Ratmono, 2023), suggesting that ESG performance may not be adequately priced by investors. For instance, (Kartika et al., 2023) find no significant relationship between ESG disclosure and market valuation among firms listed on the IDX, while (Nugrahani & Artanto, 2022) note a gap between sustainability reporting and financial outcomes.

This issue is not unique to Indonesia. In a broader Southeast Asian context, ESG's effect on firm value appears to vary across firm life cycles and industries. (Xaviera et al., 2024) show that only mature firms benefit positively from ESG in ASEAN markets. Furthermore, (Angir & Weli, 2024) emphasize that ESG-related asymmetries of information may reduce market trust in emerging capital markets.

Such inconsistencies may be rooted in the dominance of financial indicators—such as Return on Assets (ROA), Return on Equity (ROE), and Price to Book Value (PBV)—in investor decision-making. In markets with low ESG literacy, short-term performance pressures, and limited regulatory enforcement, financial performance remains the primary signal of firm quality (Gao et al., 2023; Meini & Setijaningsih, 2024; Ng & Rezaee, 2015). As a result, even firms with strong ESG profiles may struggle to translate their sustainability efforts into higher firm valuations.

This raises a critical research question: Does ESG Risk Rating influence firm value in an emerging market like Indonesia? And if so, through what mechanisms—such as operational efficiency or profitability—does this relationship materialize?

To answer this, the study draws upon three interrelated theoretical frameworks. Stakeholder Theory (Freeman, 1984) posits that firms must create value for a broad range of stakeholders beyond shareholders, thus framing ESG as a tool to enhance legitimacy and long-term trust. Resource-Based View (RBV) (Barney, 1991) views ESG as a strategic intangible asset that can create competitive advantage when effectively integrated with internal capabilities. In line with these views, ESG initiatives must be aligned with performance drivers such as asset efficiency and profitability to deliver value. As (Lui & Zainuldin, 2024) demonstrate, combining RBV and Stakeholder Theory provides a robust lens to understand how ESG practices—especially in developing contexts—are shaped by both internal resources and external stakeholder pressures.

Furthermore, Institutional Theory underscores the role of regulatory and cultural pressures in shaping corporate responses to ESG demands. Mahmood & Uddin (2021) note that in emerging markets, ESG practices often emerge as symbolic compliance rather than substantive transformation due to institutional voids and ambiguous stakeholder expectations.

Building upon these theoretical foundations, this study employs a hierarchical modelling approach to assess how ESG Risk Rating influences firm value (PBV), both directly and indirectly. It examines the mediating role of asset efficiency (measured by Total Asset Turnover, or TATO) and the moderating role of profitability (measured by Return on Assets, or ROA). This approach enables a comprehensive analysis of conditional and mediated pathways to uncover under what conditions ESG can become a driver of firm value.

Accordingly, the following hypotheses are proposed:

1. H1: ESG Risk Rating affects firm value.
2. H2: Asset efficiency mediates the relationship between ESG Risk Rating and firm value.
3. H3: Profitability moderates the relationship between ESG Risk Rating and asset efficiency.
4. H4: Profitability moderates the relationship between asset efficiency and firm value.
5. H5: There is a moderated mediation effect of ESG Risk Rating on firm value.

This study aims to contribute both empirically and theoretically by explaining how ESG interacts with internal and external firm dynamics to shape value creation in emerging markets. By focusing on Indonesian firms, it addresses gaps in ESG valuation research and offers practical insights for managers, investors, and policymakers navigating the evolving landscape of sustainability performance.

METHOD

This study employs a quantitative explanatory research design to examine the causal relationship between ESG Risk Rating and firm value. This type of research is appropriate for testing hypotheses derived from theory and for identifying both direct and indirect effects among variables. Given the complexity of the conceptual model, which includes mediation and moderation mechanisms, a hierarchical modelling approach is used. This stepwise method enables a systematic evaluation of how ESG Risk Rating affects firm value directly (baseline model), indirectly through asset efficiency (Hayes Model 4), and conditionally through profitability (Hayes Model 58).

The study involves four main variables:

1. ESG Risk Rating (ESG_Risk): Defined as the level of unmanaged ESG-related risks faced by a company, measured using Sustainalytics' ESG Risk Scores. Lower scores indicate better ESG performance (Cohen, 2023).
2. Firm Value (PBV): Used as the dependent variable, firm value is measured by the Price to Book Value (PBV) ratio, calculated as the market price per share divided by the book value per share. PBV reflects how the market values a firm relative to its net asset value (Ichwanudin et al., 2023).
3. Asset Efficiency (TATO): Acts as the mediating variable, measured using the Total Asset Turnover (TATO) ratio, calculated as net sales divided by total assets. This indicator captures how effectively a firm utilizes its assets to generate revenue (Zhou et al., 2022).
4. Profitability (ROA): Serves as the moderating variable, measured by Return on Assets (ROA), calculated as net income divided by total assets. ROA represents the firm’s ability to generate profits from its asset base (Ichwanudin et al., 2023).

This study uses secondary panel data from 13 non-financial firms that consistently appeared in the IDX ESG Leaders (IDXESGL) index during the 2020–2023 period. The sampling method employed is purposive sampling, with the following criteria:

Table 1. Population and Sample Criteria

No.	Information	Sum
	Companies that have been and are still registered in IDXESGL (2020-2023)	51
1.	Companies that are consistently listed in IDXESGL (2020-2023) with complete data on ESG Risk Rating, PBV, TATO, and ROA	(17)
2.	Companies that are not included in the financial sector	(14)
3.	Companies that have positive profitability	(13)
	Number of Observation Samples (observation data) = Number of Sample Companies x 4 years of observation	52

Source: Data processed, 2025

This selection approach ensures a balanced panel dataset, where each firm contributes observations for the full period, thus enhancing the comparability and robustness of the statistical analysis. The data were collected from audited annual financial statements published on company websites, as well as trusted financial platforms such as Yahoo Finance and Stockbit. ESG Risk Ratings were obtained from Sustainalytics via the IDXESGL Index.

To test the hypotheses, the study employs a hierarchical analysis strategy with the following models:

1. Baseline Model (H1): A simple linear regression model is used to examine the direct effect of ESG Risk Rating on firm value (PBV).
2. Hayes Model 4 (H2): This model tests the mediation effect of asset efficiency (TATO) on the relationship between ESG Risk Rating and firm value. The indirect effect is evaluated using bootstrapped confidence intervals.
3. Hayes Model 58 (for H3–H5): This model assesses the moderated mediation effect, where profitability (ROA) moderates both:
   a. the ESG_Risk → TATO path (first-stage moderation), and
   b. the TATO → PBV path (second-stage moderation).

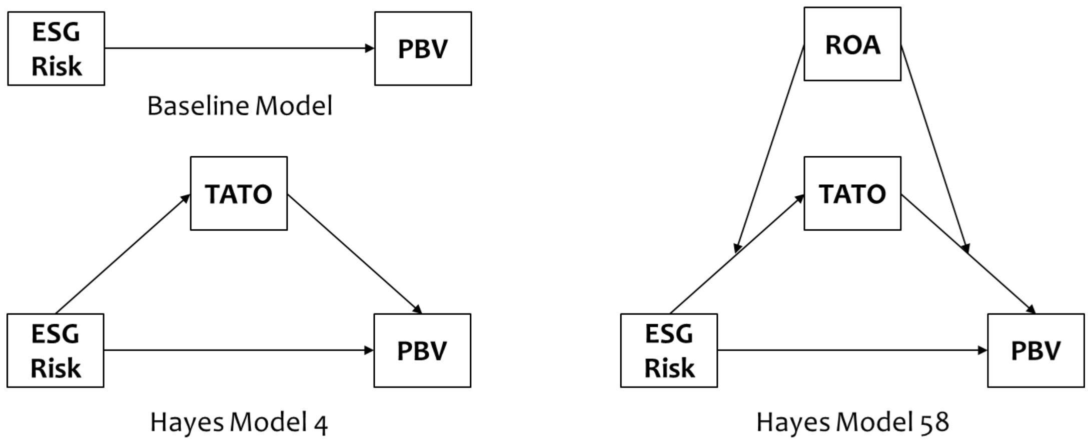

Figure 1. Research Framework

All models are estimated using SPSS with the PROCESS Macro v4.2 by Andrew F. Hayes. The mediation and moderated mediation effects are tested using bootstrap resampling (5,000 samples) to construct 95% confidence intervals (Hayes, 2017, 2022). Moderation is assessed by evaluating interaction terms, and conditional effects are reported at specific values of ROA (e.g., low, average, and high levels).

RESULTS AND DISCUSSION

Results

This study applies a hierarchical modelling approach to assess the effect of ESG Risk Rating on firm value (PBV) using three models: a baseline direct-effect model, a mediation model (Model 4), and a moderated mediation model (Model 58). All models were estimated using a balanced panel dataset of 13 non-financial firms listed consistently in IDXESGL from 2020 to 2023.

Model Baseline (Direct Effect – H1)

The baseline model tests the direct effect of ESG Risk Rating on firm value (PBV). The regression results show a negative but insignificant relationship between ESG Risk and PBV ($\beta = -0.172$; $p = 0.583$). This indicates that, in isolation, ESG Risk does not significantly influence market valuation in the context of Indonesia's ESG-focused firms and **does not support H1**.

$$PBV_{it} = 1.627 - 0.172 \cdot ESG\_Risk_{it} \ldots\ldots (1)\ (p = 0.583)$$

Model 4 (Mediation – H2)

Model 4 evaluates the mediating role of asset efficiency (TATO) in the relationship between ESG Risk and firm value. The findings are as follows:

1. ESG Risk has a significant negative effect on TATO ($\beta = -0.084$; $p = 0.001$**),
2. TATO has a significant positive effect on PBV ($\beta = 5.083$; $p = 0.007$**)

These results indicate a case of full mediation, where ESG Risk indirectly reduces firm value through lower asset efficiency, thus **supporting H2**.

1. ESG Risk → TATO (a-path):

$$TATO_{it} = 2.205 - 0.084 \cdot ESG\_Risk_{it} \ldots\ldots (2.1)$$

2. TATO & ESG Risk → PBV (b-path and c'-path):

$$PBV_{it} = -6.587 + 5.083 \cdot TATO_{it} + 0.252 \cdot ESG\_Risk_{it} \ldots\ldots (2.2)$$

The path from ESG Risk to TATO was significantly negative ($p = 0.001$), while TATO had a significant positive effect on PBV ($p = 0.007$). The indirect effect was −0.425 with a 95% confidence interval of [−0.973, −0.060], confirming a significant negative mediation effect. The direct effect of ESG Risk on PBV became nonsignificant ($\beta = 0.252$; $p = 0.446$), indicating full mediation.

Model 58 (Moderated Mediation – H3–H5)

Model 58 examines whether profitability (ROA) moderates both stages of the mediation process. The analysis yields the following findings:

1. First-stage moderation (ESG Risk × ROA → TATO): The interaction between ESG Risk and ROA in predicting TATO is not significant ($\beta = -0.173$; $p = 0.822$; CI: −1.714 to 1.367), suggesting no moderation in the ESG Risk → TATO pathway, thus **H3 is rejected**.

$$TATO_{it} = 3.283 - 0.035 \cdot ESG\_Risk_{it} - 1.488 \cdot ROA_{it} - 0.173 \cdot (ESG\_Risk_{it} \times ROA_{it}) \ldots\ldots (3.1)$$

2. Second-stage moderation (TATO × ROA → PBV): The interaction between TATO and ROA in predicting PBV is statistically significant overall ($\beta = 97.107$; $p = 0.000$; CI: 81.993 to 112.221).

$$PBV_{it} = -1.954 + 0.464 \cdot TATO_{it} - 0.662 \cdot ROA_{it} + 97.107 \cdot (TATO_{it} \times ROA_{it}) + 0.157 \cdot ESG\_Risk_{it} \ldots\ldots (3.2)$$

However, the conditional effects reveal that the moderating role of ROA is not uniformly significant across all levels:

a. At low ROA (0.032), the effect of TATO on PBV is significantly negative ($\beta = -2.919$; $p = 0.000$; CI: −3.913 to −1.924),
b. At moderate ROA (0.052), the effect is not significant (CI includes zero),
c. At high ROA (0.100), the effect is significantly positive ($\beta = 3.725$; $p = 0.000$; CI: 2.622 to 4.829).

Therefore, **H4 is partially supported**, as the moderation by ROA is only significant at the extremes (low and high), but not at the average level.

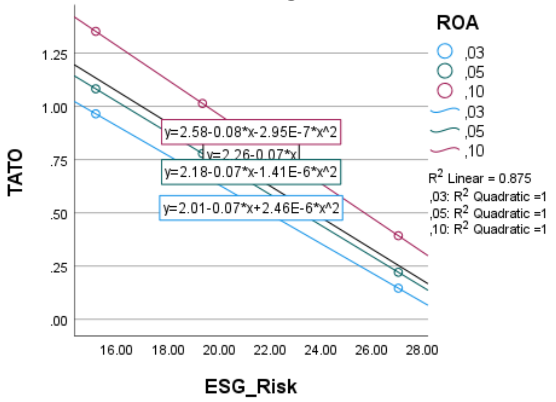

Figure 2. ESG_Risk on TATO at various ROA

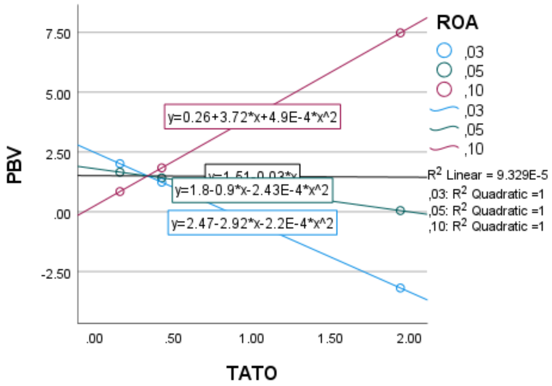

Figure 3. TATO on PBV at various ROA

As shown in Figure 3, the marginal effect of TATO on PBV increases with ROA, consistent with the significant second-stage moderation.

3. The conditional indirect effects of ESG Risk on PBV (H5) also show mixed results:
   a. Significant positive effect at low ROA (β = 0.201; CI: 0.024 to 0.381),
   b. Not significant at moderate ROA (β = 0.065; CI: –0.049 to 0.201),
   c. Not significant, negative direction at high ROA (β = –0.301; CI: –0.695 to 0.098).

These results indicate that **H5 is also partially supported**, with the moderated mediation effect being conditional and significant only at specific ROA levels, and that only the second-stage moderation is supported.

Table 2 summarizes the coefficients and significance levels across the three hierarchical models used in this study.

Table 2. Summary of Coefficients and Significance Across Models

Path	Model Baseline	Model 4 (Mediation)	Model 58 (Moderated Mediation
ESG Risk → PBV	β = –0.172 (p = 0.583)	β = 0.252 (p = 0.446)	β = 0.157 (p = 0.040) **
ESG Risk → TATO	–	β = –0.084 (p = 0.001) ***	
TATO → PBV	–	β = 5.083 (p = 0.007) ***	-
ESG Risk × ROA → TATO (1st-stage mod)	–	–	β = –0.173 (p = 0.822)
TATO × ROA → PBV (2nd-stage mod)	–	–	β = 97.107 (p = 0.000) ***
Indirect Effect (a × b)	–	β = –0.425 (CI: –0.973 to –0.060) **	Conditional: significant only at ROA low = 0.032, β = 0.201
Effect type	Direct only	Full mediation (negative)	Moderated mediation (partial)

****p<0,01, **p<0,05, *p<0,10*

*** Significant effect at the 5% level based on 95% BootCI that does not include 0 (for p-values not available in PROCESS bootstrap results.)*

Source: Data processed, 2025

This transition from Baseline Model to Model 58 demonstrates the progressive influence of ESG Risk Rating—from a non-significant factor in isolation to a conditionally significant contributor to firm value when mediated by efficiency and moderated by profitability.

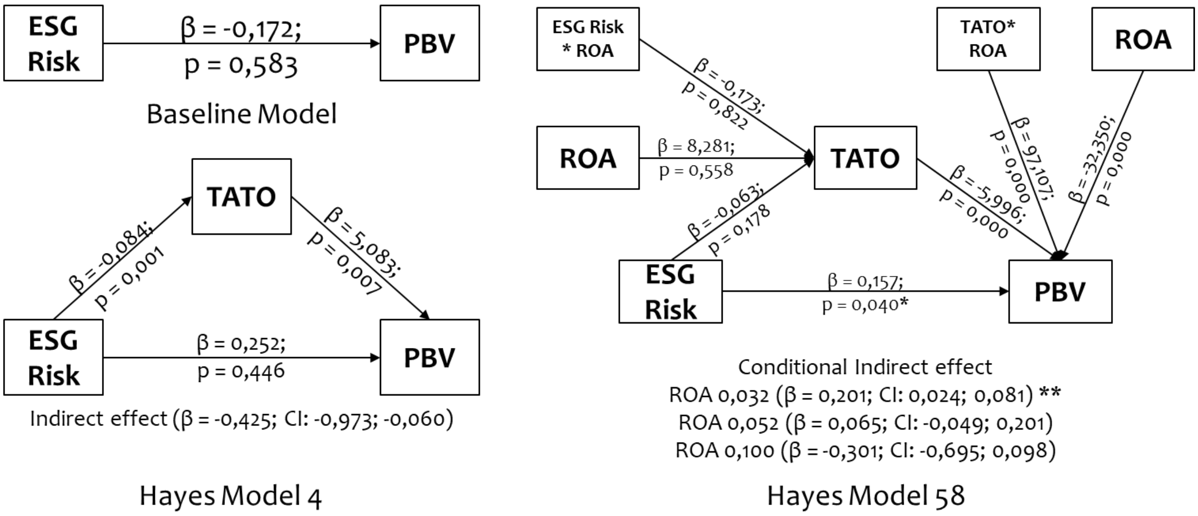

Figure 4. Regression results of the Baseline Model, Hayes Model 4 and Model 58

Discussions

The findings from the hierarchical modelling approach deepen our understanding of how ESG Risk Rating influences firm value (PBV), particularly in the context of emerging markets. By analyzing direct, mediated, and conditionally moderated effects, the study highlights that ESG's impact is neither linear nor universal—it is shaped by internal firm characteristics such as efficiency and profitability.

Direct Effect (Baseline Model – H1)

The baseline model shows no statistically significant direct effect of ESG Risk Rating on firm value. This suggests that, for firms in Indonesia, ESG performance—as captured by lower ESG risk—is not automatically priced in by the market. This result supports previous local findings (Firmansyah et al., 2023; Sulistyawati & Ratmono, 2023) and reflects the institutional realities of emerging markets where ESG integration is still evolving and financial indicators remain dominant in investor decisions.

From a theoretical perspective, this finding does not align with the expectations of Stakeholder Theory (Freeman, 1984), which posits that firms addressing stakeholder interests through ESG practices can enhance legitimacy and market value. The insignificant direct effect indicates that, in Indonesia, sustainability efforts may not yet translate into tangible market rewards, possibly due to immature ESG awareness among investors, weak regulatory enforcement, or limited stakeholder pressure for ESG accountability. As emphasized by Mahanta et al. (2024), in less mature ESG environments, sustainability signals may fail to generate investor trust or influence market valuation in the absence of tangible performance metrics.

Additionally, the result can be interpreted from the perspective of the Resource-Based View (Barney, 1991). According to RBV, ESG initiatives can be considered strategic resources capable of enhancing firm value only when they are valuable, rare, inimitable, and well-integrated into business processes. In this study, the lack of a significant direct effect suggests that ESG practices in Indonesian firms may not yet function as integrated capabilities or sources of competitive advantage. Instead, ESG efforts could still be superficial, symbolic, or isolated from core operational activities, limiting their potential to create direct financial benefits. Therefore, both from a stakeholder and resource-based perspective, the insignificant direct effect reflects the gap between ESG commitments and their effective operationalization within emerging market contexts.

Mediation Pathway (Model 4 – H2)

Once operational efficiency (TATO) is introduced as a mediating variable, the model reveals a case of full mediation: ESG Risk negatively impacts TATO, which in turn positively affects firm value. The indirect effect is significantly negative, indicating that ESG Risk reduces firm value through its negative effect on asset efficiency.

This finding can be explained through a combined perspective of Stakeholder Theory and RBV. From the stakeholder perspective, firms with high ESG risk may fail to meet stakeholder expectations related to sustainability and responsible operations. This failure can undermine legitimacy and trust among key stakeholders, including investors, customers, and regulators, which ultimately discourages market valuation.

At the same time, the Resource-Based View suggests that ESG initiatives can function as strategic resources that enhance operational capabilities—such as efficiency—when they are well-integrated into core business processes. However, high ESG risk reflects poor ESG management, which may hinder the firm's ability to leverage such resources effectively. As Lu & Gong (2023) emphasize, when ESG is implemented merely for symbolic compliance rather than for genuine operational improvement, it can drain resources and reduce efficiency.

Thus, the significant negative indirect effect of ESG Risk on firm value through asset efficiency illustrates that ESG efforts only translate into market value when they simultaneously satisfy stakeholder expectations and enhance internal operational performance. In the absence of both, ESG may instead contribute to inefficiencies and lost stakeholder confidence, leading to reduced firm value.

Moderated Mediation (Model 58 – H3 to H5)

To further clarify how internal financial performance interacts with ESG-driven efficiency, the next model introduces profitability (ROA) as a conditional factor. The introduction of profitability (ROA) as a moderator refines the interpretation further. In the first-stage moderation (ESG Risk → TATO), the interaction effect with ROA is insignificant, leading to the rejection of H3. This implies that profitability does not cushion the negative impact of ESG Risk on efficiency. In other words, high-ESG-risk firms remain inefficient regardless of their financial strength.

From the perspective of Stakeholder Theory, this finding reflects that when ESG risks are high—indicating poor ESG performance—the firm fails to meet stakeholder expectations related to sustainability and responsible operations. Consequently, even firms with strong financial performance may be unable to offset the negative stakeholder perceptions that arise from poor ESG management. Profitability alone is insufficient to protect operational efficiency if stakeholders perceive the firm's ESG practices as inadequate or superficial.

In the second-stage moderation (TATO → PBV), however, the interaction with ROA is strongly significant, partially supporting H4. The effect of TATO on PBV is significantly negative at low ROA and positive at high ROA, while remaining non-significant at average levels. This suggests that the market rewards operational efficiency only when firms are already financially healthy.

These results align with the Resource-Based View, which emphasizes that internal resources and capabilities—such as operational efficiency—contribute to firm value only when they are complemented by other supporting resources like profitability. Efficient operations by themselves may not translate into higher firm value unless the firm also possesses strong financial performance, which strengthens its ability to convert operational advantages into market-recognized value. Conversely, when profitability is low, even efficient operations fail to generate positive market valuation and may even be interpreted as insufficient compensation for financial weaknesses.

The moderated mediation effect (H5) is also partially supported, with the conditional indirect effect of ESG Risk on firm value being significant only at low profitability levels, but not at moderate or high levels. Moreover, moderation occurs only in the second stage of the mediation process, not in the ESG Risk → TATO path.

Table 3. Conditional Indirect Effects (CIE) of ESG Risk on PBV by ROA Level

ROA Level	CIE	95% CI	Significance
Low	Positive	Exclude 0	Significant
Moderate	Positive	Include 0	Not significant
High	Negative	Include 0	Not significant

Source: Data processed, 2025

This pattern suggests that ESG Risk may enhance firm value only under highly specific internal conditions—namely, when firms are financially constrained yet manage to maintain operational efficiency. In contrast, at higher profitability levels, the market may perceive ESG-driven operational improvements as neutral or even resource-consuming, particularly if ESG efforts are symbolic rather than deeply integrated into core operations.

This interpretation integrates both Stakeholder Theory and RBV. From the stakeholder perspective, firms with low profitability but visible operational efficiency improvements may gain stakeholder sympathy or trust, translating into market value. Meanwhile, from the RBV perspective, profitability functions as a complementary resource that enables firms to leverage operational efficiency into tangible market rewards. Absent strong profitability, even efficient firms may struggle to convince stakeholders and the market of their long-term value potential.

The synthesis across models emphasizes the contingent nature of ESG value creation in emerging markets like Indonesia:

Table 4. Synthesis Across Models

Model	ESG Risk → PBV	Mediation via TATO	Moderation via ROA	Conclusion
Baseline	Not significant	–	–	ESG Risk has no direct effect
Model 4	Not significant	Full mediation (negative)	–	ESG Risk reduces PBV through inefficiency
Model 58	Significant (+)	Conditional (at low ROA)	Only at second stage (TATO → PBV)	ESG effect is indirect, conditional, and partial

Source: Data processed, 2025

This progression confirms the value of hierarchical modelling. Without understanding the intermediary role of efficiency or the contextual role of profitability, conclusions from a full moderated mediation model might be misleading. For example, Model 58 shows a significant direct effect of ESG Risk on PBV, but without the mediation analysis in Model 4, this could be misinterpreted as evidence that ESG always improves firm value—which contradicts the full mediation finding.

These findings affirm the contingent nature of ESG value creation in emerging markets. In line with RBV and Stakeholder Theory, ESG practices can enhance firm legitimacy and stakeholder trust, but only when internal capabilities (efficiency and profitability) are present. As Gao et al. (2023) suggest, ESG must be "absorbed" into the operational core of the business to deliver measurable outcomes.

In the institutional context of Indonesia, where ESG regulation and investor awareness are still maturing, the market tends to respond to financial fundamentals first. This explains why ESG does not yield direct valuation benefits unless it drives cost efficiency or revenue-generating capacity—particularly among firms with strong profitability.

CONCLUSION

This study examines the effect of ESG Risk Rating on firm value using a hierarchical modelling framework that includes mediation and moderation mechanisms. Based on balanced panel data from 13 non-financial companies listed in IDX ESG Leaders from 2020 to 2023, the results demonstrate that ESG Risk Rating does not have a direct effect on firm value. However, when asset efficiency (TATO) is introduced as a mediating variable, ESG Risk exerts an indirect negative effect on firm value, suggesting that ESG-related activities may reduce operational efficiency in the short term. Furthermore, the moderated mediation model reveals that profitability (ROA) significantly moderates the relationship between TATO and firm value, but not between ESG Risk and TATO. The conditional indirect effect of ESG Risk on firm value is only significant at low levels of profitability.

These findings lead to a critical conclusion: the impact of ESG Risk on firm value is indirect and conditional, shaped by internal operational and financial dynamics. ESG initiatives alone are insufficient to increase firm value unless they translate into efficiency gains and are reinforced by strong financial performance. This highlights the importance of integrating ESG strategies into core business operations to generate tangible value, particularly in emerging market settings where investors still prioritize financial indicators.

Despite its contributions, this study has several limitations. First, the sample is limited to 13 non-financial firms with positive profitability that consistently appeared in IDX ESG Leaders over four years, which may restrict generalizability. Future research could include a larger and more diverse sample, such as unbalanced panels or cross-sectoral comparisons. Second, the study uses linear mediation–moderation models that may not capture nonlinear or time-lagged ESG effects. Longitudinal or dynamic modelling approaches could offer deeper insights into the evolving impact of ESG. Third, the analysis relies on a composite ESG Risk score from a single provider (Sustainalytics). Future studies should explore disaggregated ESG dimensions (E, S, and G) and include multiple ESG data sources to improve robustness and granularity.

Additionally, while this study is grounded in Stakeholder Theory and Resource-Based View (RBV), other theoretical perspectives—such as Institutional Theory or Signalling Theory—may enrich future research by considering the influence of external pressures, regulatory signals, and reputational dynamics in ESG valuation.

The findings offer meaningful implications for various stakeholders:

1. For corporate managers, ESG efforts must be embedded into operational strategy. Adopting ESG solely for compliance or reputation purposes may harm efficiency and fail to enhance firm value. ESG must be operationalized as a capability aligned with cost management and performance goals.
2. For investors, ESG scores should be interpreted alongside firm fundamentals. A low ESG Risk Rating alone does not ensure superior market value unless accompanied by financial strength and operational efficiency. Investors in emerging markets must apply a multidimensional evaluation framework that integrates sustainability with performance.
3. For regulators and policymakers, this study underscores the need to strengthen ESG adoption through better disclosure standards, market education, and incentives that reward

outcome-driven sustainability—not just symbolic adherence. Building a regulatory environment that fosters strategic ESG integration will be crucial for aligning financial markets with sustainable development goals.

In sum, this study emphasizes that in emerging markets, ESG value creation is not automatic—it must be strategically activated through internal efficiency and profitability, supported by institutional environments that reward substance over form.

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