International Journal of Management and Sustainability
2026 Vol. 15, No. 4, pp. 835-857
ISSN(e): 2306-0662
ISSN(p): 2306-9856
DOI: 10.18488/11.v15i4.5341
© 2026 Conscientia Beam. All Rights Reserved.

Does the market price ESG disclosure too slowly? Evidence from future performance and valuation in Indonesia

Ni Made Dwi Ratnadi[1+]
Putu D'yan Yaniartha Sukartha[2]

[1,2]*Faculty of Economics and Business, Udayana University, Jalan PB Sudirman, Denpasar Bali, Indonesia.*
[1]*Email: dwiratnadi@unud.ac.id*
[2]*Email: dyansukartha@unud.ac.id*



(+ Corresponding author)

Article History
Received: 13 July 2026
Revised: 1 September 2026
Accepted: 24 September 2026
Published: 30 October 2026

Keywords
Delayed pricing
ESG performance
Firm value
Future profitability
Indonesia.

ABSTRACT

This study examines whether environmental, social, and governance (ESG) performance is reflected immediately in market value or incorporated gradually after it begins to affect firms' future operating performance and delayed valuation. We examine this timing issue using Refinitiv Eikon data on Indonesian-listed firms from 2008 to 2025. A firm's value is measured using Tobin's Q, and future operating performance is measured using the following year's return on assets. In estimating these relationships, this research controls for profitability, firm size, leverage, liquidity, growth in sales and assets, firm age, loss-making companies, board size, and analyst following. Industry and year fixed effects were included, with standard errors clustered by firm and year to account for within-firm serial correlation and common year-level shocks. We find no association between the composite ESG score and contemporaneous Tobin's Q. The results change when the analysis examines future outcomes. Firms with higher ESG scores report better operating performance in the following year, and the relationship with firm value also appears in the later period. The timing of these results matters. Rather than responding to the ESG score itself, investors may respond when ESG practices begin to appear in observable performance. Improvements in stakeholder relationships, resilience, and management quality are unlikely to be realized immediately. Taken together, the results are more consistent with delayed, gradual pricing of ESG practices as they emerge and become observable to investors than with the view that ESG has no economic relevance in Indonesia.

Contribution/Originality: This study views ESG performance disclosure as a process. ESG practices may initially improve stakeholder relationships and operating performance, while investors wait for evidence that these benefits are substantive. This timing perspective extends stakeholder and signalling theories by explaining why ESG may matter before being reflected in market value.

1. INTRODUCTION

Firm value represents the market's assessment of a company. That assessment is not limited to current performance. It also reflects expectations about future cash flows, growth, and risk. Accounting and finance studies often measure these expectations using market-based measures, particularly Tobin's Q. The appeal of Tobin's Q is that it brings the market's forward-looking assessment into the analysis rather than relying only on values reported in the accounts. Research on firm value has traditionally been explained by the firm's financial characteristics, particularly profitability, growth, leverage, size, and risk. The emergence of sustainability reporting has made a valuable addition to the information set that investors can now use in valuation (Dechow, 2023). ESG performance

© 2026 Conscientia Beam. All Rights Reserved.

forms part of this additional evidence. It shows how the firm deals with its stakeholders and responds to sustainability-related risks. Investors may also read it as an indication of whether the firm's strategy can remain viable over the longer term (Huang, 2021).

ESG performance may influence firm value through several channels. Stakeholder theory holds that firms create value by managing their relationships with groups that affect, or are affected by, corporate activities. These groups include employees, customers, suppliers, communities, regulators, creditors, and shareholders (Freeman & Phillips, 2002; Roberts, 1992). Stronger ESG performance may ease stakeholder conflict, support employee retention and customer loyalty, reduce regulatory exposure and improve access to capital. To the extent that these benefits strengthen operating performance, they may also be reflected in market valuation. Signalling theory further suggests that ESG disclosure can reduce information asymmetry by communicating management quality, long-term orientation and risk-management capability. Consistent with this reasoning, Lys, Naughton, and Wang (2015) argue that corporate accountability reporting may convey managers' expectations of future financial performance rather than reflect expenditure on social responsibility activities.

The market is unlikely to treat ESG information in the same way as conventional financial information. Its relevance for valuation may take time to emerge. ESG disclosures cover a wide range of issues, are less standardised and often require greater judgement to verify and interpret. Rating providers bring these different elements together in a single ESG score. That process involves judgement. These choices are not uniform across rating providers. An indicator given considerable weight by one provider may receive little attention from another. Providers may also handle gaps in the underlying data differently. Variation in ESG scores may therefore arise from the rating process or from differences in corporate disclosure, rather than from ESG performance itself. Christensen, Hail, and Leuz (2021) document continuing problems in sustainability reporting, particularly in relation to implementation, materiality, assurance, comparability, and enforcement. Disclosure volume is not the same as measurement quality. Christensen, Serafeim, and Sikochi (2022) report that ESG ratings can move further apart as firms release more information, especially when the underlying outcomes cannot be observed with much precision. In a reporting system that is still maturing, investors have little basis for deciding which rating provides the more reliable signal. They may then delay incorporating the aggregate score into market value.

The evidence in accounting research is not uniform; much depends on what firms disclose and the setting in which investors receive that information. Dhaliwal, Li, Tsang, and Yang (2011) study firms that issue a standalone CSR report for the first time. The reduction in the cost of equity is found mainly among firms with relatively strong CSR performance. Matsumura, Prakash, and Vera-Muñoz (2014) examine carbon data and report valuation effects for both emissions and the decision to disclose them. Khan, Serafeim, and Yoon (2016) make a different distinction by separating sustainability issues according to their financial materiality. They find that stronger performance on financially material sustainability issues is associated with better subsequent financial performance, whereas performance on immaterial issues is not. This evidence points to a qualified form of ESG value relevance: the information matters most when investors regard it as credible, financially material, and connected to future firm fundamentals.

The evidence is not uniformly favourable to shareholders. Manchiraju and Rajgopal (2017) examine India's requirement that firms spend on CSR and document a decline in shareholder value among affected firms. Evidence from China points to a similar tension. Following the introduction of mandatory CSR disclosure, social outcomes improved, but firm profitability fell (Chen, Hung, & Wang, 2018). The interests of stakeholders and shareholders need not, therefore, move together, at least in the short run.

Existing studies usually ask whether a firm's ESG score is associated with market value in the year in which the score is observed. We begin with the same test, but do not end there. The score may reflect an operating change that has already occurred or little more than a new policy or additional disclosure. Investors cannot easily distinguish between the two at the time of reporting. ESG may consequently show no association with Tobin's Q in that year,

© 2026 Conscientia Beam. All Rights Reserved.

even though it contains information about later profitability. We use delayed pricing to describe this possibility. Under this account, a null coefficient in the same-year valuation model is not the end of the analysis; what matters is whether ESG is followed by stronger operating performance and whether the valuation effect appears later.

Three theoretical perspectives help explain why the valuation effects of ESG may take time to appear. From a stakeholder perspective, ESG practices can improve a firm's relationships with employees, customers, communities and regulators. The economic benefits emerge through those relationships, for example, through higher productivity, a stronger reputation, greater customer loyalty or lower risk, and may not be visible in the year the activity occurs. Signalling theory offers an alternative explanation for the lag. Signalling theory views ESG disclosure as not only information about the firm's future but also as a record of current activity. Investors, however, may be unwilling to accept that signal without supporting evidence; subsequent performance provides one means of assessing its credibility. Legitimacy theory begins from a less favourable premise. Firms may use additional disclosure to manage external perceptions even when their underlying operations have changed little. Firms facing external pressure may expand their ESG reporting to defend or repair organisational legitimacy, even when business practices remain largely unchanged (Cho & Patten, 2007; Hummel & Schlick, 2016; Patten, 1992). The motive behind the disclosure is not always clear to investors when it is released. Subsequent performance can help them judge whether the reporting reflects a substantive change and merits a revision in the firm's value.

Indonesia is an interesting case for this analysis. Sustainability reporting, ESG ratings, and responsible investment have become more visible in its capital market. Investors can now refer to dedicated benchmarks, including the IDX ESG Leaders and SRI-KEHATI indices. At the company level, however, the coverage and quality of ESG reporting remain uneven. Baldini, Dal Maso, Liberatore, Mazzi, and Terzani (2018) show that ESG disclosure varies with the institutional setting and the visibility of the firm; analyst coverage, cross-listing, leverage and firm size all play a role. Firm size may also influence the ratings themselves. Drempetic, Klein, and Zwergel (2020) find that larger firms tend to benefit from having more resources and more ESG data available to rating providers. ESG information is therefore increasingly available in Indonesia, but questions remain about its credibility, financial materiality, and relevance to valuation. Assurance can help investors make this distinction, but its use remains limited. Investors are then left to judge whether an ESG disclosure records a genuine change in sustainability practice or merely responds to outside expectations (Boiral, 2013; Hummel & Schlick, 2016). Until clearer evidence becomes available, they may place little weight on the ESG score when valuing the firm.

The question is especially relevant in Indonesia. Prior research shows that the usefulness of ESG information depends partly on the institutions and information intermediaries surrounding its production (Baldini et al., 2018; Berg, Kölbel, & Rigobon, 2022; Christensen et al., 2021; Drempetic et al., 2020). ESG information is not interpreted in a vacuum. Where reporting practices are still developing and analyst coverage is limited, investors have fewer reference points for deciding what an ESG score means. They may continue to rely on earnings and other accounting numbers, only then returning to the ESG signal when later results provide a basis for judging it. This is the situation examined in Indonesia. The analysis compares the same-year Tobin's Q result with the associations observed for operating performance and firm value in the following year.

This study takes into account whether environmental, social, and governance (ESG) performance is immediately reflected in firm value or is gradually incorporated through future firm fundamentals. Our sample covers Indonesian listed firms for which Refinitiv Eikon reports an ESG score during 2008–2025. The first analysis relates that score to Tobin's Q in the reporting year. A separate analysis looks one year ahead, using return on assets and Tobin's Q from the following year. Profitability, firm size, leverage, liquidity, sales growth, asset growth, firm age, loss status, board size, and analyst following enter the regressions as firm-level covariates, together with industry and year fixed effects. Following Petersen (2009), the reported standard errors allow for correlation among observations from the same firm and from the same year.

© 2026 Conscientia Beam. All Rights Reserved.

The paper reconsiders what counts as evidence of ESG value relevance. An ESG score that bears no relation to Tobin's Q in the reporting year may still contain information about later operating performance. Looking beyond the reporting year also connects our analysis with Dhaliwal et al. (2011), Lys et al. (2015), and Khan et al. (2016), whose work shows that non-financial information becomes useful when it is credible and borne out in firm fundamentals. The Indonesian evidence adds an institutional dimension to this question because ESG reporting is still developing, and little is known about how quickly the market incorporates it. The results also change how a non-significant contemporaneous coefficient can be read and interpreted. A non-significant coefficient may mean that the rating does not yet persuade investors. If the score is too broad to interpret confidently or contains largely symbolic elements, investors may wait to see whether stronger firm performance follows before revising their valuations.

For the remainder of the document, the structure is as follows. Immediately after this introduction, Section 2 sets out the theoretical background and develops the hypotheses. Section 3 turns to the sample, variable measurement, and model specification. The results are presented in Section 4. In conjunction with the previous section, Section 5 considers their interpretation and presents additional analyses and implications. Section 6 closes the paper by discussing its contributions, limitations, and possible directions for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. ESG Performance, Firm Value, and the Issue of Timing

ESG performance has been identified as an important source of non-financial information for investors, regulators, and other stakeholders. It guides capital-market participants in assessing firms' exposure to environmental risks, labour and community relations, product responsibility, governance quality, and long-term resilience.

In essence, firms with stronger ESG performance are expected to be better able to manage stakeholder claims, reduce non-financial risks, and sustain future cash flows. This has led a growing body of sustainability accounting and finance research to examine whether ESG performance is reflected in firm value.

Prior studies reach different conclusions. Some found higher market values among firms with stronger sustainability performance or more extensive disclosure; others found no such relation, or found it only in particular settings. The timing of the valuation test may account for part of this difference because ESG information need not enter market prices in the period in which it is reported. An overall score gives investors some indication of how a firm manages its stakeholders and future prospects, but the score is difficult to interpret. It can be affected by measurement noise, may not be independently verified, and may reflect commitments that investors view as largely symbolic. These limitations are particularly important in emerging markets, where reporting and assurance practices are less established, and analysts and investors have had less experience with sustainability information.

Tests that relate ESG to firm value in the reporting year may therefore tell only part of the story. Better stakeholder relations, reputation, risk management, and operational resilience do not necessarily affect market value at once. Their effects may appear first in operating performance. A weak relation between ESG and same-year Tobin's Q cannot, by itself, be taken as evidence that ESG lacks economic relevance. Investors may wait to see what the ESG score means for subsequent firm performance before revising their valuation.

This study examines what we describe as delayed pricing. Investors may give an overall ESG rating little weight in the year it is reported, particularly when the score is noisy, reflects symbolic commitments, or has no clear connection with current cash flows. The rating can nevertheless remain informative if it is followed by stronger profitability and a subsequent valuation response. A null same-year association is therefore not sufficient to establish that ESG lacks economic relevance. The consequences of ESG may not yet be visible in the firm's operating fundamentals.

© 2026 Conscientia Beam. All Rights Reserved.

2.2. Stakeholder Theory and ESG as a Source of Future Operating Performance

Our expectation that ESG performance is related to later firm outcomes is grounded primarily in stakeholder theory. Freeman (2010) argues that a firm depends not only on its shareholders but also on employees, customers, suppliers, communities, creditors and regulators. How the firm manages these relationships can affect the resources available to it, its legitimacy and its ability to survive over the longer term. ESG performance is therefore more than a matter of disclosure. It can indicate how the firm deals with environmental responsibilities, stakeholder relationships and governance arrangements, all of which may affect operating stability and future profitability.

Accounting studies provide related evidence, although they approach the issue from different directions. Roberts (1992) links differences in CSR disclosure to stakeholder-related factors. Dhaliwal et al. (2011) report a reduction in the cost of equity after firms begin issuing voluntary CSR reports, with the result concentrated among firms with stronger CSR performance. Khan et al. (2016) find better future financial performance when sustainability strengths concern financially material issues. What appears to matter, then, is not disclosure by itself, but whether the ESG information reflects substantive performance in areas of concern to stakeholders.

The contribution of ESG to later operating results can arise in different parts of the business. On environmental matters, more efficient use of resources and closer regulatory compliance can reduce waste, regulatory exposure, and future liabilities. Social practices bear more directly on employees, customers, suppliers, and local communities. Managing these relationships well can improve commitment, loyalty, and acceptance of the firm's operations. Governance arrangements operate through a different route by limiting agency problems, strengthening oversight, and supporting better decisions. These benefits may not be reflected in market value at once but may become evident gradually in operating performance.

This view is consistent with evidence that sustainability disclosure can produce real effects. Christensen, Floyd, Liu, and Maffett (2017) show that mandated mine-safety disclosure improved safety outcomes. Chen et al. (2018) find that mandatory CSR disclosure in China improved social externalities, although it reduced profitability. These studies show that sustainability reporting can affect real activities, but its implications for shareholder value depend on the channel, cost, and timing of the effect.

Accordingly, this study expects ESG performance to be more strongly associated with future operating performance than with same-year firm value. Therefore, the following hypothesis is formulated.

H_1: ESG performance is positively associated with future operating performance.

2.3. Signalling Theory and ESG as Information about Future Prospects

Signalling theory also helps explain why ESG performance may be related to later outcomes. Managers generally know more than outside investors about the firm's strategy, risk exposure and longer-term prospects. Where it is credible, ESG disclosure can convey some of this private information. It may indicate managerial quality and a longer-term orientation, as well as the firm's capacity to manage risk and withstand disruption. ESG information can thereby narrow the information gap faced by investors when assessing future firm fundamentals. Lys et al. (2015) provide a relevant signalling interpretation of corporate accountability reporting. They argue that CSR activity does not necessarily directly cause future performance but may reveal managers' private information about future financial prospects. For this study, the implication is that ESG performance may first be reflected in future operating performance and only later in market valuation. The signalling role matters because an ESG rating is not easy to interpret. An overall score compresses information on environmental management, employment practices, human rights, product responsibility, board arrangements, shareholder rights and CSR strategy into a single measure. A high score may indicate substantive performance, but it may also reflect a firm's greater capacity to produce and report ESG information. Investors cannot readily distinguish between the two. Christensen et al. (2022) show that additional disclosure can widen disagreement among ESG ratings. Berg et al. (2022) similarly trace substantial differences across rating providers to their choices concerning scope, measurement, and weighting. The evidence

© 2026 Conscientia Beam. All Rights Reserved.

above suggests that an ESG score need not be reflected in firm value when it is first observed. Investors may attach greater weight to the score after subsequent profitability, risk exposure, and operating results help them judge whether the underlying signal is substantive. ESG information can therefore remain relevant even when uncertainty delays its incorporation into market value. We expect a positive association between ESG performance and firm value in the following period. This leads to the following hypothesis.

H_2: ESG performance is positively associated with future firm value.

2.4. Legitimacy Theory, Symbolic ESG, and Weak Contemporaneous Valuation

Stakeholder and signalling theories explain why ESG may matter economically. Legitimacy theory offers a different explanation for a weak relationship with same-year firm value. Social and environmental disclosure can inform investors, but firms may also use it to preserve, defend, or restore their standing in society. ESG disclosure may therefore reflect stakeholder pressure, public-image management, or conformity with social expectations, rather than substantive performance alone. Prior accounting research supports this view. Patten (1992) shows that firms increased environmental disclosure after the Exxon Valdez oil spill, consistent with legitimacy repair. Cho and Patten (2007) argue that environmental disclosure can operate as a legitimacy tool. Cho, Guidry, Hageman, and Patten (2012) further show that environmental disclosure can mediate the reputational effects of poor environmental performance. Hummel and Schlick (2016) show that both high- and low-performing firms may disclose sustainability information, but for different reasons.

This literature helps explain why ESG scores may not be strongly associated with same-year Tobin's Q. If some firms use ESG disclosure to communicate substantive performance, while others use it mainly for legitimacy management, the average valuation effect may be weak. Investors may recognize this ambiguity and discount broad ESG scores until they are supported by future financial outcomes.

Christensen et al. (2021) emphasize that sustainability reporting remains affected by challenges involving implementation, materiality, assurance, comparability, and enforcement. These challenges are especially relevant in emerging markets, where ESG reporting systems are still developing. ESG information may therefore be informative but not fully credible. Accordingly, this study does not assume that ESG must be positively associated with same-year Tobin's Q. Instead, it expects the contemporaneous ESG–value relation to be weaker than the delayed relation, as investors may require time to determine whether ESG signals are substantive.

H_3: The association between ESG performance and future firm value is stronger than its association with contemporaneous firm value.

2.5. Relative ESG Leadership and Market Recognition

The meaning of an absolute ESG score also depends on where and when it is observed. The matters relevant to a mining or utility company are not necessarily those that matter most to a bank or a consumer-facing business. Environmental concerns tend to be more prominent in mining, energy, agriculture, manufacturing, and utilities, whereas social and governance issues may carry greater weight in financial and consumer-facing industries. A firm's ESG performance may therefore be easier to interpret when compared with that of its industry peers in the same period than when the score is viewed on its own.

Khan et al. (2016) provide a basis for making this comparison. They show that sustainability performance is more strongly associated with financial performance when it concerns financially material issues. Investors may therefore place less weight on an ESG score viewed in isolation and more on how the firm performs relative to comparable firms. A leading position among industry peers may indicate a greater ability to manage stakeholder demands, regulatory exposure, reputational risk, and longer-term sustainability challenges.

This argument is especially relevant to Indonesia, where ESG reporting practices are still developing, and international ESG coverage remains concentrated among larger firms. Raw ESG scores may therefore provide

© 2026 Conscientia Beam. All Rights Reserved.

investors with a limited basis for comparison. Investors may place greater weight on how a firm performs relative to other firms in the same sector and year. We consequently expect stronger relative ESG performance to be associated with better subsequent operating performance and a later valuation response. This expectation does not assume that every ESG score is immediately incorporated into firm value. Our focus is therefore on a firm's ESG position relative to comparable firms. The following hypothesis examines whether this position is associated with later operating performance and firm value.

H_5: Relative ESG performance is positively associated with future operating performance and future firm value.

2.6. Delayed Pricing of ESG in an Emerging Market

The possibility of delayed pricing warrants particular attention in emerging markets. The systems used to produce, assure, and interpret ESG information are generally less established than those in developed markets. Analyst coverage is also lower, and investors have had less experience with sustainability information. In such settings, familiar financial measures may carry greater weight in valuation decisions. ESG information may receive greater attention only when subsequent profitability or other observable outcomes provide evidence of its economic implications. Dhaliwal et al. (2011) examine firms that issue a voluntary CSR report for the first time. They find a subsequent reduction in the cost of equity, particularly among firms with stronger CSR performance. Dhaliwal et al. (2011) consider CSR reporting from another angle, arguing that it may communicate managers' expectations about future performance. Khan et al. (2016) shift attention to content, finding that sustainability performance is more informative when the issues involved are financially material. Matsumura et al. (2014) document that carbon emissions and their disclosure enter market valuation when the information has economic significance. What these studies have in common is that disclosure, by itself, is not enough. Sustainability information is more likely to be reflected in firm value when investors consider it credible, the underlying issue is financially material, and its economic consequences can be observed. In Indonesia, ESG reporting and ESG investment practices are growing but remain underdeveloped. ESG scores may therefore be viewed as informative but incomplete signals. Investors may not immediately reward high ESG scores unless they are accompanied by stronger profitability, operating resilience, or other indicators of firm quality. Consequently, ESG performance may be incorporated into valuation gradually.

This leads to the study's central delayed-pricing hypothesis.

H_6: Future operating performance explains the delayed association between ESG performance and future firm value.

Figure 1 summarises the argument developed above. Stakeholder theory provides the basis for the expected positive relationship between each dimension of ESG disclosure and firm value.

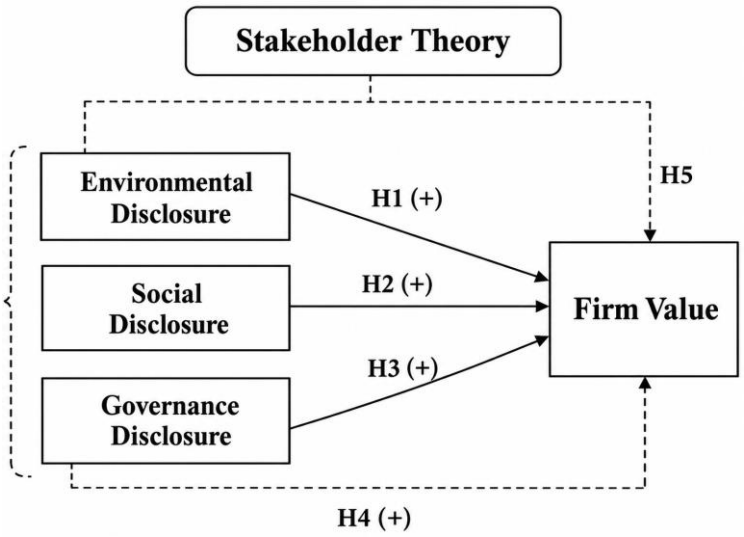


Figure 1. Conceptual framework.

© 2026 Conscientia Beam. All Rights Reserved.

3. RESEARCH METHODOLOGY

3.1. Research Design

This study examines whether ESG performance is priced immediately by the capital market or incorporated gradually through future operating performance and delayed valuation. It departs from the conventional contemporaneous ESG–firm value model by recognising that ESG information may be useful but noisy. Investors may therefore be reluctant to capitalise broad ESG scores into current firm value until such signals are confirmed by subsequent financial outcomes.

This research draws on prior accounting and sustainability disclosure literature, which suggests that ESG information becomes decision-useful when it improves the information environment, is sufficiently credible, and relates to financially material issues. Research shows that ESG disclosure is associated with market reaction (Suttipun & Yordudom, 2022), lower cost of finance (Kiran, Chughtai, Rabbani, & Aysan, 2024), firm value and risk (Brighi, Della Bina, & Venturelli, 2025), and the value relevance of accounting and financial information in sustainability-oriented valuation settings (Oubahou, El Ouafa, El-Khadiri, & Omerani, 2025). This is also consistent with evidence from Khan et al. (2016), which shows that sustainability performance is more relevant when it concerns financially material issues, while Krueger, Sautner, Tang, and Zhong (2024) document that ESG disclosure regulation improves the information environment and produces beneficial capital-market effects. Similarly, Grewal, Hauptmann, and Serafeim (2021) find that material sustainability disclosure improves stock price informativeness; Li, Gong, Zhang, and Koh (2018) report a positive association between ESG disclosure and firm value, and Reimsbach, Hahn, and Gürtürk (2018) show that assurance enhances investors' use of sustainability information.

The empirical strategy proceeds in four stages. First, the study estimates a contemporaneous valuation model to test whether ESG performance is associated with same-year firm value. Second, it examines whether ESG predicts one-year-ahead profitability. Third, it tests whether ESG is associated with one-year-ahead firm value. Finally, relative ESG leadership and ESG credibility measures are examined as supplementary tests. This sequence distinguishes whether ESG is irrelevant, value-relevant only through future fundamentals, or discounted when perceived as symbolic or insufficiently credible.

Indonesia provides an appropriate setting for this analysis. As an emerging market, ESG reporting, investor attention, and ESG rating coverage are still developing. Investors may therefore rely more heavily on conventional financial information and await observable confirmation before incorporating ESG signals into firm valuation.

3.2. Sample and Data

The sample is drawn from a Refinitiv Eikon/LSEG extract of Indonesian listed companies. The raw data are converted into a firm-year panel using fiscal period-end dates to identify the relevant reporting year. Firm age is measured as the number of years since the firm's IPO. Observations with negative earnings are classified as loss-making firm-years. The firms represented in the sample change over time because coverage of ESG scores, analyst following, valuation measures, and accounting controls is incomplete. The analysis therefore uses an unbalanced panel.

After cleaning, the dataset contains Indonesian listed firms for which ESG, accounting, market, and governance information is available between 2008 and 2025. The main regressions are confined to non-financial firms and require valid observations for the outcome variable, ESG measure, and controls, as well as an industry classification and fiscal year. Financial firms are omitted because their valuation ratios, leverage, liquidity, and asset structures have different economic meanings from those of non-financial firms. They are included only in supplementary analyses where appropriate.

Because the future-performance and delayed-valuation models require year (t+1) data, the number of observations varies across specifications. The final numbers of observations, firms, industries, and years are reported in the relevant regression tables. A sample-selection table is also provided to show exclusions arising from duplicate

© 2026 Conscientia Beam. All Rights Reserved.

firm-years, missing ESG data, missing valuation data, missing controls, financial-sector observations, and unavailable future outcomes. This is important because ESG datasets are often affected by coverage bias, particularly in emerging markets, where rating coverage is concentrated among larger and more visible firms.

3.3. Dependent Variables

The study uses two types of dependent variables: market valuation and operating performance.

The primary market valuation measure is Tobin's Q, defined as:

$$TobinQ_{it} = \frac{(MVE_{it} + BVD_{it})}{BVA_{it}} \quad (1)$$

Here, MVE_{it} is the market value of equity for firm (i) in year (t); BVD_{it} is the book value of debt, and BVA_{it} is the book value of total assets. Tobin's Q captures the market's valuation of the firm relative to the book value of its assets and is commonly used in accounting and sustainability research. Matsumura et al. (2014), for example, examine whether capital markets incorporate carbon emissions and carbon disclosure into firm value. Manchiraju and Rajgopal (2017) also use market-based valuation measures to examine whether CSR-related regulation creates shareholder value.

As an alternative valuation measure, the study uses price-to-book value.

$$PBV_{it} = \frac{MVE_{it}}{BookEquity_{it}} \quad (2)$$

Where $BookEquity_{it}$ denotes the book value of equity. Firm-years with non-positive book equity are excluded from *PBV* regressions.

Because *Tobin's Q* and *PBV* are typically right-skewed, particularly in emerging capital markets, the study also uses logarithmic transformations.

$$LnTobinQ_{it} = ln(1 + TobinQ_{it}) \quad (3)$$

and,

$$LnPBV_{it} = ln(1 + PBV_{it}) \quad (4)$$

The future operating performance measure is one-year-ahead return on assets.

$$ROA_{i,t+1} = \frac{NetIncome_{i,t+1}}{TotalAssets_{i,t+1}} \quad (5)$$

We use return on assets in the following year to examine whether ESG performance contains information about later firm fundamentals. This choice reflects the possibility that ESG practices first change how a firm operates and manages its stakeholders. Any gains in efficiency, risk control, employee productivity, customer loyalty, or reputation may take time to appear in reported profitability and even longer in market value. Khan et al. (2016) provide related evidence by linking financially material sustainability performance to future financial performance. Lys et al. (2015) offer a complementary interpretation, viewing CSR reporting as a possible signal of the firm's prospects.

Delayed market valuation is measured using one-year-ahead Tobin's Q, logged Tobin's Q, PBV, and logged PBV. These variables allow the study to test whether ESG performance is incorporated into market value after investors observe subsequent operating consequences.

3.4. Main ESG Variables

Our principal explanatory variable is the Refinitiv/LSEG ESG Score, denoted as $ESGScore_{it}$. The score ranges from zero to 100 and draws on public information about a firm's environmental, social, and governance activities (Islam & van Staden, 2018). We do not treat it as a direct or error-free observation of underlying sustainability quality. The measure captures the ESG performance that can be inferred from public reporting. The reported score cannot be entirely separated from the method used to produce it. Rating providers make different decisions about the data to include, how an indicator is defined, the weight it receives, and whether the underlying issue is material. Berg et al.

© 2026 Conscientia Beam. All Rights Reserved.

(2022) show the consequence: the same firm can receive quite different ESG assessments from different providers. More disclosure does not always produce greater agreement. Christensen et al. (2022) report wider disagreement when the underlying ESG outcome still cannot be measured with confidence.

To account for changes in ESG scoring distributions over time, the study also constructs a year-standardized ESG measure.

$$ESGz_{it} = \frac{ESGScore_{it} - MeanESGScore_t}{SDESGScore_t} \quad (6)$$

Where $MeanESGScore_t$ and $SDESGScore_t$ are the mean and standard deviation of ESG scores in fiscal year (t). This transformed measure captures a firm's position among firms rated in the same year. A year-specific comparison is useful in Indonesia, where rating coverage and ESG disclosure practices have changed considerably over the sample period.

The study also constructs a relative ESG leadership indicator.

$$HighESG_{it} = 1 \text{ if } ESGScore_{it} \geq P75_t \quad (7)$$

Where $P75_t$ is the fiscal-year-specific 75th percentile of ESG scores, $HighESG_{it}$ identifies annual ESG leaders. It takes a value of one when a firm falls within the highest quartile of the ESG distribution for that year and zero otherwise. The indicator is used to test whether the market response is more apparent among firms whose ESG standing is well above that of their contemporaneous peers. We assess whether the result depends on this cutoff by repeating the analysis for the upper tercile and upper quintile.

3.5. ESG Credibility and Controversy Measures

Although the revised study primarily focuses on delayed pricing, it also examines ESG credibility using Refinitiv/LSEG's controversy-related measures. These analyses are reported as supplementary tests because the current data contain relatively limited variation in ESG controversy observations. The ESG Combined Score, denoted as $ESGC_{it}$, captures controversy-adjusted ESG performance. Refinitiv/LSEG adjusts the standalone ESG Score when firms are exposed to significant ESG controversies. Therefore, $ESGC_{it}$ is interpreted as a credibility-adjusted ESG measure. The ESG Controversies Score, denoted as $ControversyScore_{it}$, captures exposure to negative ESG-related events. In Refinitiv/LSEG's original coding, a higher controversy score indicates fewer or less severe controversies. For ease of interpretation, the study defines controversy intensity as follows:

$$ControversyIntensity_{it} = 100 - ControversyScore_{it} \quad (8)$$

Higher values therefore indicate greater controversy exposure. The study also defines a binary controversy-event variable.

$$ControversyEvent_{it} = 1 \text{ if } ControversyScore_{it} < 100 \quad (9)$$

And zero otherwise. This indicator captures whether the firm experienced an ESG controversy signal in a given firm-year.

Finally, the symbolic ESG gap is defined as:

$$SymbolicGap_{it} = ESGScore_{it} - ESGC_{it} \quad (10)$$

The symbolic gap is positive when incorporating controversy information lowers the firm's headline ESG score. It is intended to capture walk-talk inconsistency, namely, a difference between reported ESG performance and conduct suggested by controversy events. A larger gap may therefore indicate greater risk to the credibility of the ESG signal. The measure varies little in the Indonesian sample, however, and is consequently confined to supplementary tests.

3.6. Control Variables

The empirical models include firm-level controls commonly used in accounting, finance, and sustainability research. ROA measures profitability, as more profitable firms are expected to have higher valuation multiples. Firm

© 2026 Conscientia Beam. All Rights Reserved.

size is measured as the natural logarithm of total assets and controls for scale, visibility, reporting capacity, and the information environment. Leverage, measured as total liabilities divided by total assets, captures financial risk and capital structure. Liquidity is measured using the current ratio, with logarithmic transformations applied where appropriate to reduce skewness.

The models include two measures of growth. Sales growth represents changes in operating activity, whereas asset growth reflects investment in the firm's asset base. Firm age reflects the time elapsed since the firm's IPO and is expressed in logarithmic form. The loss variable identifies firm-years in which net income is negative. Board size accounts for differences in governance and monitoring capacity, while analyst following represents the information environment in which investors interpret ESG performance.

The Refinitiv extract contains too few usable observations on ownership concentration, dividend payout, and capital expenditure for these measures to enter the main regressions. Where coverage permits, we examine them using the smaller available sample. The baseline estimates should therefore be interpreted with this data constraint in mind.

3.7. Empirical Models

The empirical analysis is organized around five main models, each corresponding directly to one of the five hypotheses.

3.7.1. Model 1: ESG and Contemporaneous Firm Value

The first model tests whether ESG performance is associated with same-year firm value.

$$Value_{it} = \alpha + \beta_1 ESGScore_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (11)$$

Here, $Value_{it}$ represents Tobin's Q in the main specification. Alternative specifications use logged Tobin's Q, PBV, and logged PBV. $Controls_{it}$ is the vector of firm-level control variables. η_j represents industry fixed effects, and λ_t represents year fixed effects. This model corresponds to H1 and tests whether ESG performance is priced immediately by the capital market. If $ESGScore_{it}$ is insignificant in this model, the result indicates that ESG is not mechanically capitalized into contemporaneous firm value.

3.7.2. Model 2: ESG and Future Operating Performance

The second model tests whether ESG performance predicts future operating performance.

$$ROA_{i,t+1} = \alpha + \beta_1 ESGScore_{it} + \rho ROA_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (12)$$

The coefficient β_1 captures whether ESG performance in year t predicts profitability in year t+1, after controlling for current profitability and other firm characteristics.

This model corresponds to H2. A positive coefficient on $ESGScore_{it}$ would support the argument that ESG performance is economically meaningful because it predicts future firm fundamentals.

3.7.3. Model 3: ESG and Delayed Firm Value

The third model tests whether ESG performance is associated with delayed market valuation.

$$Value_{i,t+1} = \alpha + \beta_1 ESGScore_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (13)$$

Where $Value_{i,t+1}$ represents one-year-ahead Tobin's Q in the main specification.

This model corresponds to H3. A positive coefficient on $ESGScore_{it}$ would indicate that ESG performance is incorporated into market value with a lag, supporting the delayed-pricing argument.

3.7.4. Model 4: Relative ESG Leadership and Future Outcomes

The fourth model tests whether relative ESG leadership predicts future operating performance and delayed valuation.

© 2026 Conscientia Beam. All Rights Reserved.

$$FutureOutcome_{i,t+1} = \alpha + \beta_1 RelativeESG_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (14)$$

Where $FutureOutcome_{i,t+1}$ represents either $ROA_{i,t+1}$ or $Value_{i,t+1}$. $RelativeESG_{it}$ is measured using either $ESGz_{it}$ or $HighESG_{it}$.

This model corresponds to H4. Its purpose is to examine whether firms with stronger ESG performance relative to their annual peer group exhibit stronger future outcomes. The main specification uses $HighESG_{it}$, while $ESGz_{it}$ serves as an alternative measure of relative ESG performance.

3.7.5. Model 5: Future Operating Performance as the Delayed-Pricing Channel

The fifth model tests whether future operating performance helps explain the delayed valuation effects of ESG performance.

$$Value_{i,t+1} = \alpha + \beta_1 ESGScore_{it} + \beta_2 ROA_{i,t+1} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (15)$$

This model corresponds to H5. The delayed-pricing channel is supported if three conditions are observed. First, $ESGScore_{it}$ predicts $ROA_{i,t+1}$ in Model 2. Second, $ESGScore_{it}$ predicts $Value_{i,t+1}$ in Model 3. Third, the coefficient on $ESGScore_{it}$ becomes smaller after $ROA_{i,t+1}$ is included in Model 5. This pattern would suggest that ESG is reflected in market valuation through its association with future operating performance.

3.8. Supplementary ESG Credibility Models

The study also estimates supplementary ESG credibility models using ESGC, controversy intensity, controversy-event indicators, and the symbolic ESG gap. These models do not represent additional hypotheses; instead, they provide additional evidence on whether ESG credibility affects valuation.

The ESGC model is specified as follows:

$$Value_{it} = \alpha + \beta_1 ESGC_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (16)$$

The ESG controversy model is specified as follows:

$$Value_{it} = \alpha + \beta_1 ESGScore_{it} + \beta_2 ControversyIntensity_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (17)$$

The symbolic ESG gap model is specified as follows:

$$Value_{it} = \alpha + \beta_1 ESGScore_{it} + \beta_2 SymbolicGap_{it} + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (18)$$

The ESG controversy moderation model is specified as follows:

$$Value_{it} = \alpha + \beta_1 ESGScore_{it} + \beta_2 ControversyIntensity_{it} + \beta_3 (ESGScore_{it} \times ControversyIntensity_{it}) + \gamma Controls_{it} + \eta_j + \lambda_t + \varepsilon_{it} \quad (19)$$

A negative coefficient on β_3 would suggest that ESG performance becomes less value-relevant when controversy intensity is higher. These tests are interpreted cautiously because variation in controversy is sparse in the current dataset. Therefore, the delayed-pricing and future-performance models remain the central empirical strategy.

3.9. Fixed Effects and Standard Errors

The baseline models include industry and year fixed effects to control for sector-level differences and time-specific shocks. Where sufficient within-firm variation exists, firm and year fixed-effects models are estimated as robustness tests. Standard errors are clustered by firm and year, following Petersen (2009), as residuals may be correlated within firms over time and across firms within the same fiscal year. Continuous financial variables are winsorized at the 1st and 99th percentiles, while bounded ESG variables are not winsorized.

3.10. Robustness Tests

Several robustness tests are conducted. First, the models are re-estimated using alternative valuation measures, including logged Tobin's Q, PBV, and logged PBV. Second, ESG Score is replaced with year-standardized ESG performance and the high-ESG leadership indicator. Third, delayed valuation models are estimated with and without

© 2026 Conscientia Beam. All Rights Reserved.

current-year valuation as an additional control. Fourth, the analysis is repeated using the broader all-firm sample and the non-financial subsample. Fifth, firm and year fixed-effects specifications are estimated where feasible.

We also report tests based on the separate ESG pillars, the ESGC measure, controversy intensity, recorded controversy events, and the symbolic ESG gap. These tests do not replace the main analysis, which examines whether ESG enters valuation through subsequent firm fundamentals. They are presented as supplementary evidence, particularly because Refinitiv records relatively few controversy observations for Indonesian firms.

3.11. Endogeneity Considerations

Our empirical tests are associational. Nevertheless, the ordering of the variables aids interpretation: ESG is measured in the reporting year, while profitability and valuation outcomes are drawn from the following year. Industry and year indicators account for common sectoral and period effects. The remaining covariates capture differences in firms' financial position, recent growth, age, loss status, board size, and analyst following. We repeat the tests using alternative measures and samples. Although these features lessen some familiar endogeneity concerns, omitted influences may remain.

We could not justify the exclusion restriction for any potential ESG instruments available in the data. The industry-year peer mean illustrates the problem. It may help explain a firm's ESG score, but it can also proxy for industry developments that affect profitability and market value in their own right. We therefore do not pursue an instrumental-variable specification. The regression estimates are interpreted as non-causal associations after conditioning on the included controls.

4. RESULTS

4.1. Sample Selection and Descriptive Statistics

Table 1 reports the sample from the cleaned Refinitiv/LSEG extract to the observations used in each regression. The data initially provide 837 firm-years for 114 listed firms. Removing financial firms reduces the sample to 656 firm-years. Of these, 564 observations for 80 firms contain the data required for the contemporaneous valuation tests. The need to observe outcomes in the following year further reduces the available sample. The future ROA and Tobin's Q regressions use 484 firm-years for 70 firms, whereas the future PBV regressions use 470 firm-years for 69 firms.

Table 1. Sample construction.

Sample step	Firm-years	Firms
Regression-ready all-firm observations from cleaned Refinitiv/LSEG file	837	114
Less: Financial-sector observations	181	31
Non-financial firm-year observations	656	83
Main contemporaneous valuation sample (Complete controls)	564	80
Future ROA/Future TobinQ sample	484	70
Future PBV alternative sample	470	69

Note: The table reports the construction of the analysis sample. Financial firms are excluded from the main analysis because valuation ratios, leverage, liquidity, and asset structures are not directly comparable with non-financial firms. Future-outcome samples are smaller because observations require data in year t+1.

Table 2 summarises the variables used in the one-year-ahead tests. Tobin's Q averages 2.236 in the reporting year and 2.063 in the following year. The ESG Score has a mean of 48.095 and a standard deviation of 19.186, showing considerable differences in reported ESG performance among the sampled firms. Profitability, leverage, liquidity, growth, and analyst following also vary across the sample. This dispersion allows the regressions to examine whether ESG contains information about later outcomes beyond that captured by conventional financial characteristics.

© 2026 Conscientia Beam. All Rights Reserved.

Table 2. Descriptive statistics.

Variables	N	Mean	SD	Min.	Median	Max.
TobinQ	484	2.236	2.870	0.287	1.304	22.233
Future TobinQ	484	2.063	2.681	0.287	1.257	22.233
PBV	472	3.857	6.482	0.130	1.862	33.838
Future PBV	470	3.551	6.178	0.130	1.739	33.838
ROA	484	0.089	0.101	-0.546	0.069	0.405
Future ROA	484	0.083	0.097	-0.546	0.067	0.405
ESG Score	484	48.095	19.186	10.044	48.832	86.733
ESGz	484	0.030	0.981	-1.867	0.000	2.305
High ESG	484	0.260	0.439	0.000	0.000	1.000
Firm size	484	31.311	0.903	28.590	31.289	33.055
Leverage	484	0.460	0.224	0.044	0.430	1.898
Current ratio	484	2.172	1.778	0.099	1.737	17.382
Sales growth	484	0.521	1.965	-0.851	-0.080	9.388
Asset growth	484	0.089	0.138	-0.180	0.070	0.672
Firm age	484	3.012	0.487	1.048	3.155	3.612
Loss	484	0.091	0.288	0.000	0.000	1.000
Board size	484	6.340	2.182	2.000	6.000	13.630
Analyst following	484	11.785	6.164	0.000	13.000	20.000

Note: TobinQ is Tobin's Q, measured as the market value of equity plus book value of debt divided by book value of total assets; Future TobinQ refers to one-year-ahead Tobin's Q; PBV is price-to-book value, measured as market value of equity divided by book value of equity; Future PBV refers to one-year-ahead price-to-book value; ROA is return on assets, measured as net income divided by total assets. Future ROA refers to one-year-ahead return on assets. ESG Score is the Refinitiv/LSEG firm-year ESG performance score; ESGz is the year-standardized ESG score, calculated by subtracting the annual mean ESG score from the firm's ESG score and dividing it by the annual standard deviation of ESG scores; High ESG is an indicator variable coded 1 if the firm's ESG score is at or above the 75th percentile of the annual ESG score distribution, and 0 otherwise; Firm Size is the natural logarithm of total assets; Leverage is total liabilities divided by total assets; Current Ratio is current assets divided by current liabilities; Sales Growth is the annual change in sales scaled by prior-year sales; Asset Growth is the annual change in total assets scaled by prior-year total assets; Firm Age is measured as the natural logarithm of one plus the number of years since the firm's IPO; Loss is an indicator variable coded 1 if the firm reports negative net income, and 0 otherwise; Board Size is the number of board members; Analyst Following is the number of analysts following the firm. Industry and year fixed effects are included. Standard errors are clustered by firm and fiscal year following Petersen (2009). Continuous financial variables are winsorized at the 1st and 99th percentiles. The table reports descriptive statistics for the main future-outcome estimation sample. TobinQ, PBV, ROA, leverage, liquidity, sales growth, asset growth, board size, and analyst following are winsorized following the data-cleaning procedure. ESG Score ranges from 0 to 100. High ESG equals one when a firm is in the top quartile of ESG scores within the fiscal year and zero otherwise.

4.2. Correlation Analysis and Multicollinearity

Table 3 reports Pearson correlations among the principal variables. The ESG Score is positively correlated with future ROA, future TobinQ, and future PBV, although these correlations are moderate in magnitude. This pattern is consistent with the delayed-pricing argument: ESG performance contains information about future outcomes, but it is not simply a substitute for profitability or firm size. The future valuation variables are highly correlated with one another, as expected, because they capture related market-based valuation constructs. Current ROA is strongly correlated with future ROA and future valuation variables, confirming the need to control for current profitability in the regression models.

Table 3. Pearson correlation matrix.

Variables	FROA	FTQ	FPBV	ESG	ESGz	ROA	SIZE	LEV	SGR	ANALYST
FROA	1.000									
FTQ	0.690	1.000								
FPBV	0.623	0.882	1.000							
ESG	0.174	0.155	0.168	1.000						
ESGz	0.210	0.200	0.202	0.983	1.000					
ROA	0.790	0.669	0.614	0.148	0.196	1.000				
SIZE	-0.303	-0.291	-0.304	0.094	0.084	-0.316	1.000			
LEV	-0.130	0.102	0.302	-0.031	-0.036	-0.149	0.175	1.000		
SGR	0.044	0.026	-0.001	0.003	-0.004	-0.069	-0.037	0.009	1.000	
ANALYST	0.190	0.153	0.146	0.068	0.150	0.237	0.195	0.104	-0.105	1.000

Note: The table reports selected Pearson correlations. FROA is one-year-ahead ROA, FTQ is one-year-ahead TobinQ, FPBV is one-year-ahead price-to-book value, ESG is the Refinitiv/LSEG ESG Score, ESGz is the year-standardized ESG Score, SIZE is the natural logarithm of total assets, LEV is leverage, SGR is sales growth, and ANALYST is analyst following. Correlations are descriptive and do not control for industry or year effects.

© 2026 Conscientia Beam. All Rights Reserved.

Table 4 reports variance inflation factors for the main regression variables. The highest VIF is 1.858 for leverage, and the mean VIF is approximately 1.41. These values are well below conventional concern thresholds. Therefore, multicollinearity does not appear to threaten the stability of the main estimates.

Table 4. Multicollinearity test.

Variables	VIF
Leverage	1.858
ROA	1.773
Current ratio	1.690
Loss	1.544
Firm size	1.411
Board size	1.409
Analyst following	1.391
Firm age	1.134
ESG Score	1.130
Asset growth	1.125
Sales growth	1.033

Note: The table reports variance inflation factors from the main control-variable specification. The maximum VIF is 1.858, and the mean VIF is approximately 1.41. These results indicate that multicollinearity is not a serious concern in the main models.

Table 5. Main panel regression results.

Variables	M1 Current TobinQ	M2 Future ROA	M3 Future TobinQ	M4 Relative ESG Future ROA	M5 Channel Future TobinQ
ESG score	0.013	0.0007**	0.022		0.016
	(0.012)	(0.0002)	(0.014)		(0.012)
Year-standardized ESG				0.013**	
				(0.0046)	
Future ROA					9.689***
					(2.623)
ROA	21.992***	0.634***	18.866***	0.634***	12.728***
	(5.035)	(0.093)	(5.002)	(0.094)	(3.298)
Firm size	-0.222	-0.0013	-0.267	-0.0015	-0.254*
	(0.170)	(0.0056)	(0.164)	(0.0056)	(0.144)
Leverage	3.871**	0.010	3.694**	0.010	3.594**
	(1.384)	(0.020)	(1.430)	(0.020)	(1.320)
Current ratio	0.0064	0.0040**	0.019	0.0040**	-0.019
	(0.043)	(0.0017)	(0.065)	(0.0017)	(0.074)
Sales growth	-0.012	0.0042**	0.063	0.0042**	0.022
	(0.025)	(0.0015)	(0.062)	(0.0015)	(0.057)
Asset growth	-1.709**	-0.011	-1.776***	-0.011	-1.666**
	(0.695)	(0.029)	(0.583)	(0.029)	(0.567)
Firm age	0.023	0.0088	0.267	0.0089	0.181
	(0.303)	(0.0084)	(0.375)	(0.0084)	(0.319)
Loss	1.860**	-0.018	1.734**	-0.018	1.908**
	(0.684)	(0.019)	(0.706)	(0.019)	(0.705)
Board size	-0.106	-0.0032*	-0.156	-0.0032*	-0.125
	(0.080)	(0.0017)	(0.096)	(0.0017)	(0.082)
Analyst following	0.0019	0.0004	0.0038	0.0004	0.0002
	(0.028)	(0.0006)	(0.029)	(0.0006)	(0.028)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	564	484	484	484	484
Firms	80	70	70	70	70
Years	17	16	16	16	16
Adj. R-squared	0.614	0.635	0.609	0.635	0.652

Note: Standard errors clustered by firm and year are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The regressions include industry and year fixed effects. M1 uses current TobinQ as the dependent variable. M2 and M4 use one-year-ahead ROA. M3 and M5 use one-year-ahead TobinQ. Petersen-style two-way clustered standard errors address within-firm serial correlation and common year-level shocks.

© 2026 Conscientia Beam. All Rights Reserved.

4.3. Main Panel Regression Results

Table 5 presents the main panel regression results. All specifications include industry and year fixed effects. Standard errors are clustered by firm and year, following Petersen (2009). Model 1 relates the ESG Score to Tobin's Q measured in the same year. The estimated coefficient is positive but not statistically different from zero. The model therefore provides no evidence that the overall ESG rating is incorporated into contemporaneous firm value. In the Indonesian setting, this result is consistent with investors placing limited weight on a broad rating whose content may be noisy or difficult to verify.

Model 2 provides the strongest evidence in the main analysis. ESG Score is positive and statistically significant in the future ROA model, suggesting that stronger ESG performance predicts better one-year-ahead operating performance. This result supports the argument that ESG performance is economically meaningful because it is associated with subsequent firm fundamentals. Model 3 shows that ESG Score is positive but not statistically significant in the future TobinQ model. Thus, the evidence that ESG is incorporated into delayed market valuation is weaker when TobinQ is used as the valuation measure.

Model 4 replaces the raw ESG Score with the year-standardized ESG Score. The coefficient on ESGz is positive and statistically significant in the future ROA model, indicating that firms with stronger ESG performance relative to the annual ESG distribution achieve higher future profitability. Model 5 includes future ROA in the future TobinQ model. Future ROA is positive and highly significant, while the ESG coefficient becomes smaller than in Model 3. This pattern is consistent with a delayed-pricing channel, in which ESG affects valuation partly through its association with future operating performance. However, this should be interpreted as evidence of a channel rather than as a strict causal mediation test.

Table 6. Alternative future PBV and relative ESG specifications.

Variables	Future PBV	ESGz Future PBV	HighESG Future ROA	HighESG Future PBV	Channel Future PBV
ESG score	0.049				0.040
	(0.028)				(0.025)
Year-standardized ESG		0.967*			
		(0.542)			
High ESG indicator			0.015	1.804	
			(0.010)	(1.045)	
Future ROA					19.282***
					(4.788)
ROA	41.545***	41.429***	0.649***	41.829***	28.180***
	(9.482)	(9.500)	(0.098)	(9.642)	(7.911)
Firm size	-0.854*	-0.861*	-0.0026	-0.924*	-0.812*
	(0.426)	(0.425)	(0.0060)	(0.451)	(0.415)
Leverage	16.943***	16.916***	0.015	17.189***	16.705***
	(4.797)	(4.786)	(0.021)	(4.878)	(4.491)
Asset growth	-5.567**	-5.546**	-0.019	-6.074**	-5.078**
	(1.937)	(1.940)	(0.029)	(2.103)	(1.830)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	470	470	484	470	470
Firms	69	69	70	69	69
Years	16	16	16	16	16
Adj. R-squared	0.682	0.683	0.629	0.681	0.706

Note: Standard errors clustered by firm and year are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The table reports alternative specifications using one-year-ahead PBV and relative ESG measures. The High ESG models use a top-quartile annual ESG indicator. The channel model includes future ROA to assess whether future profitability explains part of the delayed valuation relation.

4.4. Alternative Future PBV and Relative ESG Specifications

Table 6 reports PBV measured in the following year and the relative ESG measures. The PBV results provide greater support for delayed valuation than the corresponding Tobin's Q results. The coefficient on the ESG Score is

© 2026 Conscientia Beam. All Rights Reserved.

positive and close to the conventional threshold for statistical significance. The year-standardised ESG measure is also positive and marginally significant. These estimates are consistent with the market attaching some value to ESG performance when equity value is assessed relative to book equity. The evidence is suggestive rather than decisive. It offers partial support for delayed pricing but does not establish that ESG performance causes firm value to increase.

The High ESG indicator is positive in both the future ROA and future PBV specifications, but it is not statistically significant. This suggests that the continuous relative ESG measure provides more informative evidence than the threshold-based ESG leadership classification. The channel specification using future PBV again shows that future ROA is strongly associated with delayed valuation, and the ESG coefficient declines after future ROA is added to the model.

4.5. Additional ESG Credibility Analyses Controversy Effects

Table 7 reports supplementary ESG credibility tests. ESGC is not significantly associated with current TobinQ, and controversy intensity has no standalone valuation effect. The ESG-by-controversy interaction is negative and statistically significant, suggesting that controversy exposure may weaken the valuation relevance of ESG performance.

However, this result must be interpreted cautiously because only a small number of non-financial firm-year observations have positive controversy intensity. The symbolic gap is not interpretable because it has no meaningful variation in the usable sample. These findings justify treating ESGC and controversy variables as supplementary evidence rather than the central empirical design.

Table 7. Supplementary ESG credibility tests.

Test	Key variables	Coefficient	p-value	Interpretation
ESGC current TobinQ	ESGC	0.0128	0.309	No incremental valuation evidence
Controversy current TobinQ	Controversy intensity	-0.0008	0.930	No standalone controversy effect
ESG x controversy interaction	Interaction term	-0.0008	0.039	Negative interaction, but based on sparse controversy variation
Symbolic gap	Symbolic Gap	Not interpretable	n/a	Symbolic gap has no meaningful variation in the usable sample

Note: The table summarizes supplementary ESG credibility tests. ESGC is the Refinitiv/LSEG ESG Combined Score. Controversy intensity is defined as 100 minus the controversy score, so higher values indicate greater controversy exposure. Only 16 non-financial firm-years have positive controversy intensity; therefore, controversy-based evidence is interpreted cautiously and kept supplementary.

4.6. Hypothesis-Level Interpretation

Table 8 summarizes the hypothesis-level interpretation. Overall, the results provide the strongest support for the future-performance hypothesis. ESG performance predicts one-year-ahead ROA, and relative ESG performance also predicts future ROA. The evidence for delayed valuation is positive but weaker: the ESG Score is not significant in the future TobinQ model, but it is positive and marginally significant in the alternative future PBV specification. The channel evidence is also partial.

Future ROA is strongly associated with future valuation, and the ESG coefficient declines when future ROA is included. Taken together, the results support a cautious delayed-pricing interpretation: ESG is not immediately priced into current TobinQ, but it contains information about future operating performance and provides limited evidence of delayed valuation relevance.

© 2026 Conscientia Beam. All Rights Reserved.

Table 8. Summary of hypothesis testing.

Hypothesis	Main empirical evidence	Result	Interpretation
H1: ESG predicts future operating performance	ESG Score in future ROA model	0.0007, p = 0.015	Supported
H2: ESG predicts future firm value	ESG Score in future TobinQ and alternative future PBV models	Future TobinQ: p = 0.146; Future PBV: p = 0.103	Partially supported; evidence is positive but weak
H3: Contemporaneous pricing is weaker than delayed pricing	Current TobinQ compared with future valuation models	Current TobinQ: p = 0.308; Future PBV: p = 0.103	Partially supported; stronger for PBV than TobinQ
H4: Relative ESG leadership predicts future outcomes	ESGz in future ROA and future PBV models	Future ROA: p = 0.015; Future PBV: p = 0.095	Supported for continuous relative ESG; threshold HighESG weaker
H5: Future ROA is a delayed-pricing channel	Future ROA included in future value models	Future ROA: p = 0.002 (TobinQ); p = 0.001 (PBV)	Partial channel evidence; not causal mediation

Note: The table summarizes hypothesis-level conclusions. The interpretation is deliberately conservative. The results provide strong evidence that ESG predicts future operating performance, but only partial evidence that ESG is reflected in delayed market valuation. The channel result should be interpreted as predictive channel evidence rather than causal mediation.

5. DISCUSSION

The findings indicate that ESG performance in Indonesia is not mechanically incorporated into contemporaneous market valuation. The coefficient on ESG Score is positive but insignificant in the current Tobin's Q model, suggesting that investors do not immediately assign a valuation premium to firms with higher ESG ratings. However, ESG Score is positively associated with one-year-ahead ROA. This indicates that ESG performance is more clearly reflected in future operating fundamentals than in same-year firm value. The delayed valuation evidence is positive but weaker: ESG Score is insignificant in the future Tobin's Q model, while the alternative future PBV specification provides only marginal evidence of delayed market recognition.

The results of our analysis support a delayed-pricing interpretation of ESG rather than the simpler claim that ESG directly increases firm value. We find no significant association between the ESG Score and Tobin's Q when measured in the same year. It would be premature, however, to conclude from this result that ESG has no economic relevance. The Refinitiv score brings together a wide range of environmental, social and governance activities that are unlikely to be equally material, credible or closely related to future cash flows. This may make the score difficult for investors to interpret when reported. The problem is likely to be greater in Indonesia, where the arrangements supporting ESG reporting, assurance and enforcement continue to develop. This interpretation is consistent with Christensen et al. (2021) who recognise that sustainability reporting can affect capital markets, stakeholders and firm behaviour, but also draw attention to continuing problems of implementation, materiality, comparability, assurance and enforcement.

The most consistent evidence in this study is found in the future performance tests. The ESG Score is positively associated with ROA in the following year. This is important because the ESG association is first observed in operating performance rather than market value. Stakeholder theory explains this result. A firm that manages its relationships with employees, customers, suppliers, communities, creditors, regulators and investors more effectively may encounter less stakeholder conflict and enjoy greater operating stability. It may also benefit from stronger employee commitment, customer loyalty and reputation. These advantages are unlikely to be realised immediately. Their effects may instead become apparent as the firm's operations and profitability develop over time.

The result for subsequent-year ROA may also reflect differences in how firms are managed. Firms with higher ESG scores may pay closer attention to risk, maintain more effective internal processes, and take a longer view of their relationships with stakeholders. Such characteristics may contribute to later operating performance, even though investors do not attach value to them in the reporting year. The ESG Score, in this respect, appears to provide more information about future fundamentals than about current valuation. This reading of the results is consistent

© 2026 Conscientia Beam. All Rights Reserved.

with Khan et al. (2016), who show that sustainability performance is economically relevant when it concerns financially material issues. It is also consistent with Lys et al. (2015), who regard corporate accountability reporting as a possible signal of prospects, and Dhaliwal et al. (2011), who find a lower cost of equity following voluntary CSR disclosure when the firm's CSR performance is stronger.

The valuation results are less clear. Although the coefficient on ESG Score is positive when Tobin's Q is measured in the following year, it is not statistically significant. The result for PBV is stronger, but only marginally so. It would therefore be difficult to argue from these estimates that firms with stronger ESG performance generally have higher market values. The channel analysis offers a more limited explanation of the results. ROA in the following year is strongly associated with both subsequent Tobin's Q and subsequent PBV. When this measure of operating performance is included, the ESG coefficient becomes smaller. This pattern is consistent with ESG becoming relevant to valuation through later operating performance, but it does not establish that this is a causal mediation process.

The analysis of relative ESG performance provides further support for this interpretation. The year-standardised ESG measure is positively associated with ROA in the following year and is marginally significant in the subsequent PBV model. A firm's ESG standing relative to other firms in the same year may therefore be more informative than its unadjusted score. This is relevant in a setting where rating coverage has expanded, reporting practices have changed, and the distribution of ESG scores has shifted over time. By comparison, the High ESG indicator produces weaker results. This indicator identifies firms above a particular threshold but ignores differences among firms within each group. The year-standardised score retains the variation that is lost when firms are divided at the High ESG threshold. We therefore rely on the continuous measure in the main analysis and use the High ESG indicator to assess the robustness of the results.

The credibility tests provide little additional evidence. ESGC is not incrementally associated with valuation, while controversy intensity has no significant standalone effect. The symbolic ESG gap also has too little variation in the usable sample to permit meaningful interpretation. Although the interaction between ESG and controversy intensity is negative, only a small number of non-financial firm-years record positive controversy intensity. It would be unwise to draw a strong conclusion from an estimate based on so few observations. These results do not reject the possibility that credibility affects how investors assess ESG. Instead, they show that the controversy data available for Indonesian firms are not sufficiently extensive to examine this issue reliably. Accordingly, the credibility tests are supplementary to the main analysis.

The findings introduce a timing qualification into the stakeholder argument. Stakeholder theory suggests that effective management of stakeholder relationships can benefit the firm. Our results support this argument, but locate the benefit first in later profitability rather than current market value. Signalling theory offers a related explanation. The ESG Score may communicate information about managerial capability, long-term orientation, and operating resilience, although investors appear to require evidence from later performance before placing weight on that information. Legitimacy theory helps explain why the average contemporaneous valuation response is weak. Some firms may use ESG reporting to communicate substantive changes in performance, while others may use it primarily to maintain or restore legitimacy. Investors cannot necessarily distinguish between these motives when the information is released. This is consistent with Hummel and Schlick (2016), who show that the motivation for sustainability disclosure can differ according to the firm's underlying sustainability performance.

The results of this study lead us to view ESG value relevance as a process that develops over time. ESG performance is not associated with firm value in the reporting year, but it is associated with operating performance in the following year. The evidence of a subsequent valuation response is weaker and is found mainly in the PBV specifications. Overall, ESG appears to matter first through its association with stakeholder relationships, managerial capability, and operating resilience. Its relevance to market value becomes more apparent only when these effects begin to be reflected in firm fundamentals.

© 2026 Conscientia Beam. All Rights Reserved.

5.1. Practical Implications

The findings are relevant to managers, investors, and regulators. Managers should not expect a high ESG score to increase firm value immediately. ESG activities are more likely to matter when they improve business operations, employee performance, customer relationships, supply-chain stability, and the management of regulatory risk. These improvements may support future profitability. Investors may therefore place greater value on ESG information when there is clear evidence that it is associated with better firm performance. Regulators can support this process by improving the consistency, comparability, and assurance of ESG reporting.

For investors, the ESG score should not be used as a mechanical valuation screen. A high ESG score does not necessarily imply an immediate valuation premium. However, ESG performance may contain useful information about future profitability. Investors may therefore treat ESG as a forward-looking operating signal rather than as a direct valuation variable.

For regulators and standard setters, the results underscore the importance of improving the comparability, credibility, and usefulness of sustainability reporting. Investors are unlikely to respond quickly when ESG disclosures are general, repetitive, or difficult to verify. Clearer reporting requirements, more specific guidance on materiality, and credible assurance may help investors distinguish substantive ESG performance from disclosures intended mainly to create a favourable impression. This interpretation is consistent with the sustainability reporting literature, which shows that CSR and sustainability information is most useful when it informs assessments of future cash flows and firm risk.

5.2. Limitations and Future Research

Two limitations exist for this study, and both are particularly important when interpreting the results. The first concerns causality. ESG is measured before profitability and valuation, and the models account for industry, year, and a range of observable firm characteristics. The reported standard errors also allow for dependence within firms and years, following Petersen (2009). These choices address some concerns about model specification, but they do not show that ESG causes the later outcomes. This caution is reinforced by the firm fixed-effects estimates, in which the ESG coefficients become smaller. Part of the association in the main models may therefore arise from firm attributes that change little over time, such as management practices, corporate culture, or business model.

The second limitation concerns the strength of the valuation evidence. The result for ROA in the following year is clearer than the result for market value. The ESG Score is not significant in the model of subsequent Tobin's Q, while the PBV result is only marginally significant. The evidence is therefore consistent with delayed market recognition, but only in part. It is not sufficient to conclude that ESG performance increases firm value.

Third, the ESG credibility tests are constrained by limited variation in controversies. Only a small number of non-financial firm-years have positive controversy intensity, and the symbolic ESG gap offers little usable variation. Future studies may use richer controversy databases, media-based ESG controversy measures, or event-study designs to examine credibility shocks more directly.

Fourth, future research may examine whether delayed pricing differs across ESG pillars, industries, and materiality categories. ESG effects may be stronger where environmental, social, or governance issues are financially material. Longer lag structures may also be useful because some ESG benefits may take more than one year to appear in market valuations.

6. CONCLUSIONS

This study examines whether ESG performance is priced immediately or incorporated gradually through future firm outcomes. Using Refinitiv/LSEG ESG data for Indonesian listed firms, the results show that the ESG Score is not significantly associated with contemporaneous Tobin's Q. This suggests that investors do not automatically assign an immediate valuation premium to firms with higher ESG ratings.

© 2026 Conscientia Beam. All Rights Reserved.

However, the ESG Score is positively associated with one-year-ahead ROA, suggesting that the economic relevance of ESG performance is more clearly observed in subsequent operating performance than in contemporaneous market valuation. Evidence of delayed market pricing is more limited. ESG is not significant in the future Tobin's Q model, while the future PBV model provides only marginal support. Taken together, these findings suggest a delayed-pricing explanation, whereby ESG performance appears to become economically meaningful first through improvements in future operating fundamentals before being only partially incorporated into market valuation.

The study adds to sustainability accounting research by drawing attention to the timing of the market response. The absence of a relationship between ESG and firm value in the reporting year is not, by itself, evidence that ESG has no economic relevance. In our tests, the clearer result appears in profitability one year later. Investors may place weight on an ESG score only when the activities behind it begin to affect the firm's operations. This issue is especially important in an emerging market, where broad ESG ratings are not always easy to compare or verify, and their financial materiality may be uncertain.

There is also a practical point. Managers gain little from treating ESG as an exercise in disclosure or reputation if it does not change how the business operates. Investors should likewise avoid interpreting the ESG Score as an immediate measure of firm value. It may be more useful as an early indication of operating performance, requiring confirmation from subsequent results.

The results should be interpreted with some caution. Our design places ESG before the profitability and valuation measures, but this ordering is not sufficient to show that ESG causes either outcome. Nor are the findings equally strong across the tests. The association with profitability in the following year is clearer than the association with later market value. The controversy analysis is more limited because few observations contain recorded controversies. Research covering a longer period may determine whether a valuation response takes more than one year to appear. It could also examine the ESG pillars separately, allow material issues to differ across industries, and use more complete evidence on assurance and corporate controversies.

For Indonesian firms, the ESG Score is not associated with firm value in the year in which it is observed. Its clearest association is with operating performance in the following year. The market response, where present, occurs later and is less certain. The economic relevance of ESG therefore depends on whether the activities represented by the score become visible in subsequent firm performance.

Funding: This study received no specific financial support.
Institutional Review Board Statement: Not applicable.
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.
Disclosure of AI Use: As both the authors are non-native English speakers, we used AI in the form of Microsoft Copilot and Grammarly solely to improve the language quality, readability, grammar, and clarity of the manuscript. None of these tools were used to generate the research ideas, theoretical framework, hypotheses, data, empirical analysis, interpretation of results, or conclusions. Author undertakes all conceptual development, data collection, data analysis, and scholarly arguments. We take full responsibility of the article's content and we have edited and reviewed the manuscript carefully before submitting for publication.

REFERENCES

Baldini, M., Dal Maso, L., Liberatore, G., Mazzi, F., & Terzani, S. (2018). Role of country- and firm-level determinants in environmental, social, and governance disclosure. *Journal of Business Ethics*, *150*(1), 79-98. https://doi.org/10.1007/s10551-016-3139-1

Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance*, *26*(6), 1315-1344. https://doi.org/10.1093/rof/rfac033

© 2026 Conscientia Beam. All Rights Reserved.

Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, Auditing & Accountability Journal*, *26*(7), 1036-1071. https://doi.org/10.1108/AAAJ-04-2012-00998

Brighi, P., Della Bina, A. C. F., & Venturelli, V. (2025). Firm value and risk: How relevant are ESG factors and ESG controversies? *Journal of Financial Reporting and Accounting*, 1-46. https://doi.org/10.1108/JFRA-12-2024-0953

Chen, Y.-C., Hung, M., & Wang, Y. (2018). The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. *Journal of Accounting and Economics*, *65*(1), 169-190. https://doi.org/10.1016/j.jacceco.2017.11.009

Cho, C. H., Guidry, R. P., Hageman, A. M., & Patten, D. M. (2012). Do actions speak louder than words? An empirical investigation of corporate environmental reputation. *Accounting, Organizations and Society*, *37*(1), 14-25. https://doi.org/10.1016/j.aos.2011.12.001

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, *32*(7-8), 639-647. https://doi.org/10.1016/j.aos.2006.09.009

Christensen, D. M., Serafeim, G., & Sikochi, A. (2022). Why is corporate virtue in the eye of the beholder? The case of ESG ratings. *The Accounting Review*, *97*(1), 147-175. https://doi.org/10.2308/TAR-2019-0506

Christensen, H. B., Floyd, E., Liu, L. Y., & Maffett, M. (2017). The real effects of mandated information on social responsibility in financial reports: Evidence from mine-safety records. *Journal of Accounting and Economics*, *64*(2-3), 284-304. https://doi.org/10.1016/j.jacceco.2017.08.001

Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and sustainability reporting: Economic analysis and literature review. *Review of Accounting Studies*, *26*(3), 1176-1248. https://doi.org/10.1007/s11142-021-09609-5

Dechow, P. M. (2023). Understanding the sustainability reporting landscape and research opportunities in accounting. *The Accounting Review*, *98*(5), 481-493. https://doi.org/10.2308/TAR-2023-0145

Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, *86*(1), 59-100. https://doi.org/10.2308/accr.00000005

Drempetic, S., Klein, C., & Zwergel, B. (2020). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, *167*(2), 333-360. https://doi.org/10.1007/s10551-019-04164-1

Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge, England: Cambridge University Press.

Freeman, R. E., & Phillips, R. A. (2002). Stakeholder theory: A libertarian defense. *Business Ethics Quarterly*, *12*(3), 331-349. https://doi.org/10.2307/3858020

Grewal, J., Hauptmann, C., & Serafeim, G. (2021). Material sustainability information and stock price informativeness. *Journal of Business Ethics*, *171*(3), 513-544. https://doi.org/10.1007/s10551-020-04451-2

Huang, D. Z. X. (2021). Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting & Finance*, *61*(1), 335–360. https://doi.org/10.1111/acfi.12569

Hummel, K., & Schlick, C. (2016). The relationship between sustainability performance and sustainability disclosure – Reconciling voluntary disclosure theory and legitimacy theory. *Journal of Accounting and Public Policy*, *35*(5), 455-476. https://doi.org/10.1016/j.jaccpubpol.2016.06.001

Islam, M. A., & van Staden, C. J. (2018). Social movement NGOs and the comprehensiveness of conflict mineral disclosures: Evidence from global companies. *Accounting, Organizations and Society*, *65*, 1-19. https://doi.org/10.1016/j.aos.2017.11.002

Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate sustainability: First evidence on materiality. *The Accounting Review*, *91*(6), 1697-1724. https://doi.org/10.2308/accr-51383

Kiran, M., Chughtai, S., Rabbani, M. R., & Aysan, A. F. (2024). ESG disclosure and cost of finance: The moderating role of managerial ownership. *Journal of Financial Reporting and Accounting*. https://doi.org/10.1108/JFRA-05-2024-0251

Krueger, P., Sautner, Z., Tang, D. Y., & Zhong, R. (2024). The effects of mandatory ESG disclosure around the world. *Journal of Accounting Research*, *62*(5), 1795-1847. https://doi.org/10.1111/1475-679X.12548

© 2026 Conscientia Beam. All Rights Reserved.

Li, Y., Gong, M., Zhang, X.-Y., & Koh, L. (2018). The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *The British Accounting Review, 50*(1), 60-75. https://doi.org/10.1016/j.bar.2017.09.007

Lys, T., Naughton, J. P., & Wang, C. (2015). Signaling through corporate accountability reporting. *Journal of Accounting and Economics, 60*(1), 56-72. https://doi.org/10.1016/j.jacceco.2015.03.001

Manchiraju, H., & Rajgopal, S. (2017). Does corporate social responsibility (CSR) create shareholder value? Evidence from the Indian Companies Act 2013. *Journal of Accounting Research, 55*(5), 1257-1300. https://doi.org/10.1111/1475-679X.12174

Matsumura, E. M., Prakash, R., & Vera-Muñoz, S. C. (2014). Firm-value effects of carbon emissions and carbon disclosures. *The Accounting Review, 89*(2), 695-724. https://doi.org/10.2308/accr-50629

Oubahou, Y., El Ouafa, K., El-Khadiri, H., & Omerani, D. (2025). Sustainability-driven valuation: How ESG moderates the value relevance of accounting and financial information in emerging markets. *Journal of Financial Reporting and Accounting*. https://doi.org/10.1108/JFRA-05-2025-0372

Patten, D. M. (1992). Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory. *Accounting, Organizations and Society, 17*(5), 471-475. https://doi.org/10.1016/0361-3682(92)90042-Q

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies, 22*(1), 435-480. https://doi.org/10.1093/rfs/hhn053

Reimsbach, D., Hahn, R., & Gürtürk, A. (2018). Integrated reporting and assurance of sustainability information: An experimental study on professional investors' information processing. *European Accounting Review, 27*(3), 559-581. https://doi.org/10.1080/09638180.2016.1273787

Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society, 17*(6), 595-612. https://doi.org/10.1016/0361-3682(92)90015-K

Suttipun, M., & Yordudom, T. (2022). Impact of environmental, social and governance disclosures on market reaction: An evidence of Top50 companies listed from Thailand. *Journal of Financial Reporting and Accounting, 20*(3-4), 753-767. https://doi.org/10.1108/JFRA-12-2020-0377

Views and opinions expressed in this article are the views and opinions of the author(s), International Journal of Management and Sustainability shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.

© 2026 Conscientia Beam. All Rights Reserved.